

THE WEATHER — PARIS: Friday, cloudy with rain. Temp. 10-15 (50-64). LONDON: Friday, overcast with rain. Temp. 12-19 (54-71). CHANNEL: Showy. ROME: Friday, cloudy. Temp. 15-22 (59-72). FRANKFURT: Friday, cloudy, possible rain. Temp. 8-16 (46-61). NEW YORK: Friday, cloudy. Temp. 10-16 (50-61).

ADDITIONAL WEATHER DATA — PAGE 29

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## Other Donors Tie Third World Aid To U.S. Cutbacks

By Clyde H. Farnsworth  
*New York Times Service*

WASHINGTON — Foreign aid is set to scale back their contribution to the poorest countries in proportion to any reductions made in the United States.

The decision, made Wednesday, delegates attending the 36th annual meeting of the World Bank and the International Monetary Fund, may unravel a three-year, \$2-billion commitment made by

billion a year, but Congress has already trimmed the first-year outlay to \$500 million and in the budget reconciliation bill approved last summer voted to stretch out the full payment over four years.

### \$820 Million Asked

The administration has asked for \$820 million in the second year, but U.S. legislators attending some sessions of the weeklong conference in Washington expressed doubts that this amount would be approved.

Three American representatives — Norman D. Shumway of California, Robert L. Livingston of Louisiana and Mickey Edwards of Oklahoma — questioned whether the appropriation request would even get to the floor. If it does not, analysts said, Congress will probably pass a continuing resolution providing for financing at the prior year's level.

Under the decision made by other donor nations, the \$12-billion development agency package could thereby be trimmed by more than \$2 billion.

U.S. Treasury Secretary Donald T. Regan sought to dispel some of the gloom at the conference Wednesday, predicting that global conditions would improve if countries adhered to austerity policies. "There are encouraging signs in our economic future," he said.

The central theme of this conference, which has drawn 15,000 bankers and government economic officers to Washington, is that the next few years will be especially hard on the least-developed countries and that all countries must now do more to help themselves.

### Reagan Comment

President Reagan told the conference Tuesday that "unless a nation puts its own financial and economic house in order, no amount of aid will produce progress."

The International Development Agency is an affiliate of the World Bank that makes \$3-year loans to the neediest nations with no interest charge and only a small administrative fee. A replenishment package covering 1981, 1982 and 1983 was negotiated during the Carter administration in which the United States agreed to provide \$3.24 billion, or 27 percent of the total.

Although the Reagan administration has said it will honor the commitment, it is having trouble getting Congress to appropriate the funds.

The United States had said it will provide a little more than \$1

### Criticism From EEC

BRUSSELS (AP) — The European Economic Community's top foreign aid official charged Thursday that President Reagan's formula for world economic recovery is "deadly to the poor."

In his speech at the International Monetary Fund and World Bank meeting, Mr. Reagan reiterated the administration's view that improving the private free world market is the best way to help developing countries.

Edgard Pisani, EEC development commissioner, asserted that if people in the world's poor countries are left "to the fate of the market, they will be less well off than before. We cannot leave the fate of men in the hands of economic forces."

Mr. Pisani's remarks were made after he unveiled new EEC Commission proposals for improving aid to countries with food shortages and disorganized agriculture systems. The proposal calls for an initial additional aid of \$40 million to the EEC's 1981 food aid program and for establishment of consortiums of EEC countries to coordinate aid.

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## Iranian Raid Reported On Oil Site in Kuwait

**Reuters**  
KUWAIT — Kuwait reported that Iranian aircraft attacked a Kuwaiti oil installation Thursday and set it ablaze.

The report was apparently corroborated by U.S. radar planes based in Saudi Arabia.

Iran denied involvement and countered by blaming its enemy in the Gulf, Iraq, for the attack.

Kuwait said three Iranian planes bombed an oil complex north of Kuwait city, destroying parts of it but causing no casualties.

The U.S. secretary of state, Alexander M. Haig Jr., told the Senate Foreign Relations Committee in Washington that U.S. AWACS radar planes in Saudi Arabia had monitored Iranian planes bombing Kuwait.

**Controversial Issue**  
Mr. Haig's revelation highlighted the controversial issue of U.S. radar planes in Saudi Arabia, strongly opposed by Israel and much of the U.S. Congress.

The secretary of state said the AWACS monitoring of the attack on Kuwait was a "God-given warning" of the importance of the radar planes.

Mr. Haig said a U.S. AWACS plane in Saudi Arabia had picked up Iranian aircraft almost from the time they became airborne on their flight to bomb the oil installation.

No advance warning was given to Kuwait, but Mr. Haig said that if the AWACS had been in the Saudi defense system, they would have given warning in time to enable the Saudi Arabians to deploy fighters and engage them before they could drop their bombs.

Iranian Foreign Ministry officials, quoted by Tehran Radio, blamed Iraqi planes for the attack on Kuwait but offered no proof.

### Iran Alleges Plot

They said the attack was part of an anti-Iranian plot by the United States and Israel with the cooperation of Britain and France. The plot was linked to recent visits to the Middle East by French President François Mitterrand, British Prime Minister Margaret Thatcher, the Iranian officials asserted.

Kuwait has accused Iran of



Rescuers carry a victim of a car bomb that exploded Thursday morning in West Beirut, killing at least 40 persons and wounding 247 others near the offices of the Palestine Liberation Organization.

## Car Bomb in West Beirut Kills 40, Wounds 247 Near Offices of PLO

*United Press International*

BEIRUT — A powerful car bomb exploded outside a PLO office in a densely populated Palestinian neighborhood in West Beirut on Thursday morning, killing at least 40 persons and wounding 247 others.

WAFA said no leading PLO official was hurt in the blast, which went off in front of the organization's foreign press office and 500 yards from the office of Saad Khalaf, also known as Abu Iyad, the second-ranking man in el-Fatah, the PLO's main political-military body.

WAFA said Abu Iyad's office was damaged in the blast, but that he was not injured.

A police spokesman described the bomb scene as chaotic, and Beirut's American University Hospital said it was on "red alert" to handle the casualties.

WAFA said Abu Iyad's office was damaged in the blast, but that he was not injured.

A police spokesman described the bomb scene as chaotic, and Beirut's American University Hospital said it was on "red alert" to handle the casualties.

No group immediately claimed responsibility for the bombing, the latest in a series of attacks against Palestinians and Lebanese leftist targets since Sept. 17.

A shadowy group called the Front for the Liberation of Lebanon from Foreigners has said it was behind the other bombings.

The rightist Phalangist Voice of Lebanon radio said the car was packed with 220 pounds (100 kilograms) of explosives.

Reporters said the scene was similar to the Israeli air attack against the PLO headquarters in Beirut on July 17, in which 300 persons were killed and 700 wounded.

"Rows of buildings along both sides of the street are badly destroyed. Cars are burning and the place is littered with severed limbs and corpses," a reporter said.

Chaos Follows

In the chaos after the explosion, Palestinian guerrillas fired their Soviet-made AK-47 machine guns into the air and cleared all roads leading out of the blast area, witnesses said.

Three air attacks on a Kuwaiti customs post on the border with Iraq, two in November last year and one in June this year, Iran denied the raids.

Kuwait is an important transit point for goods to Iraq, whose only ports have been closed by the war.

Gulf oil analysts said the oil-gathering center in the Umm Al Aish area, an expanse of sand and scrub about 25 miles (40 kilometers) south of the Iraqi border and about the same distance north of Kuwait city, was a collecting point for a relatively small proportion of Kuwaiti output.

They said Kuwaiti oil production had risen recently to more than 700,000 barrels a day from a depressed level of 600,000 month.



MOURNING IN TEHRAN — Funeral ceremonies were held Thursday in Tehran for four top military leaders killed in a plane crash Tuesday. Despite the deaths, however, Iranian leaders are going ahead with elections Friday to replace slain President Mohammed Ali Rajai. Story, Page 2.

*United Press International*

## U.S. Will Nearly Triple Grain Offered to Russia

By Dusko Doder  
*Washington Post Service*

MOSCOW — The Reagan administration agreed Thursday to provide an additional 15 million tons of grain to the Soviet Union during the next 12 months, boosting to a record level the availability of American wheat and corn Moscow needs to offset a poor harvest.

The agreement was announced by Undersecretary of Agriculture Seely Lodwick after two days of talks with senior Soviet officials. It raises to 23 million tons the amount available to the Soviet Union for the period of Oct. 1, 1981, to Sept. 30, 1982.

In a prepared statement that he read at a news conference, Mr. Lodwick said that it was his "best judgment" that the Russians would purchase an additional 10 million tons, bringing total U.S. exports to the Soviet Union to 18 million tons for the crop year.

Another official said later that the Russians may take all available American grain in case Argentina has a below-average harvest, as is expected.

The Russians have already purchased 7.7 million tons of U.S. grain; this was part of the 8-million-ton ceiling allowed under the previous sales agreement for the period. U.S. officials said the largest previous Soviet purchase of American grain in a single crop year was 15.5 million tons in 1978-79.

*Carter Embargo*

Former President Jimmy Carter imposed an embargo on grain exports to the Soviet Union after the intervention in Afghanistan in December, 1979. The ban exempted 8 million tons previously contracted for in the 1979-80 period and the same amount for the current crop year.

President Reagan ended the embargo this year in keeping with his election campaign criticism last fall that the ban was unfair to American farmers.

Mr. Carter's cancellation of contracts for 17 million tons of grain — above the contracted 8 million tons not affected by the embargo — was the first time the United States has significantly used food as a weapon in foreign policy. It was widely argued in Washington that the lifting of the restriction by Mr. Reagan would send a wrong signal to the Russians.

Moscow's negotiators were believed to have sought assurances from the American side that unforeseen political developments in the future would not lead to a new embargo. However, Donald N.

Reagan threatened to veto legislation exceeding his spending targets. Page 2.

• The U.S. is listening carefully to Israeli proposals for stronger military ties. Page 3.

and recently concluded agreement with that country to import \$1 billion in Argentine meat during the next five years.

Moscow also signed an agreement with Brazil to buy 2.5 million tons of soya-bean and the same amount of corn during a five-year period.

Similar purchases are being negotiated with Canada, Australia and several other countries. But the Soviet crop this year — hit by floods in some areas and drought in others — is expected to be especially poor.

In this context, all alternate sources available to the Russians could not meet the expected import total of 40 million tons if the Russians did not get access to the American grain market.

## Reagan Says AWACS Needed for Oil Security

By Fred Farris  
*International Herald Tribune*

WASHINGTON — As his chief Cabinet members fought to save his proposal to sell AWACS planes to Saudi Arabia, President Reagan declared Thursday that the sale did not threaten Israel and was necessary "to defend the oil fields on which the security of the free world depends."

He also declared that the United States would not allow Saudi Arabia "to be an Iran."

On Capitol Hill, Secretary of State Alexander M. Haig Jr. announced a U.S.-Saudi "understanding" regarding a U.S. presence on the radar surveillance planes well into the 1990s.

But Sen. John H. Glenn Jr., Democrat of Ohio, a principal opponent of the AWACS sale, said his conditions for dropping his objections "have not been met yet."

He spoke after hearing closed-door testimony from Mr. Haig who formally presented the Reagan administration's proposed sales package to the Senate Foreign Relations Committee.

Mr. Reagan said at a news conference that both Israel's security and the stability of a Middle East peace were of vital concern to the United States. He emphasized that the plan to sell the \$8.5-billion package of five radar planes and aircraft arm improvements also "enhances our own vital national interests in the Middle East."

A reporter recalled that the Carter administration once considered selling the sophisticated

say that Saudi Arabia, we will not permit to be an Iran."

He was asked later how he could prevent an Iran-type upheaval in Saudi Arabia. Although the United States had made mistakes in Iran, Mr. Reagan replied, in Saudi Arabia it is not just the United States but the entire Western world that is involved.

There is no way we could stand by and see those energy resources taken over by anyone else," Mr. Reagan said, referring to the fact that oil from Saudi Arabia and the Gulf region supply a large part of the energy for the industrialized West.

Mr. Haig was followed by Defense Secretary Caspar W. Weinberger in urging the Senate Foreign Relations Committee in secret sessions to embrace the Saudi sale.

The deal would go forward unless both houses of Congress voted it by majority vote within 30 days after its submission. In the House, it is opposed by an apparent majority, so the administration is concentrating its efforts in the Senate, where it might still be salvaged.

The administration's formal submission of the arms package had been postponed from Wednesday, reportedly, to gain additional time for administration negotiations with the Saudi Arabsians to develop a formula that the Senate would accept.

Sen. Charles H. Percy, Republican of Illinois and chairman of the Foreign Relations Committee, said he thinks there are "new assurances" from Saudi Arabia to surmount the hurdle of joint U.S.-Saudi manning of the planes. Sen. Glenn has proposed that U.S. crews also serve aboard the AWACS planes in Saudi Arabia, a notion that authoritative Saudi sources had rejected as infringing on the kingdom's sovereignty.

Mr. Haig said after the Senate committee hearing that a key point of an eight-part "understanding" with Saudi Arabia is that "only carefully screened Saudi and U.S. nationals will be permitted to be involved with these aircraft."

He added: "Given the shortage of Saudi air crews and technicians this means that there will be an American presence in the aircraft and on the ground well into the 1990s."

In addition to the five Airborne Warning and Control Systems craft, the package includes eight Boeing 707 aerial refueling planes, 1,177 Super Sidewinder air-to-air missiles for its jet fighters, 202 special fuel tanks that will permit Saudi F-15 fighters to increase their range, plus spare parts. AWACS can carry equipment to detect aircraft attacking from more than 200 miles (320 kilometers) away, compared with 20 miles for ground radar.

Israel has declared the proposal a threat to its security. But Mr. Reagan on Thursday, in his fourth formal news conference, underscored his conviction that it was not a threat to Israel.

Moreover, he said, it was important for other nations to perceive that the United States was not allowing other nations — some observers interpreted this to mean Israel — to "make American foreign policy."

## INSIDE

### Printers Yield

Printers whose pay dispute threatened to close The Times of London and The Sunday Times have agreed to return to work. Page 2.

### Collected Signatures

The three opponents, who each collected more than 50 signatures on qualifying petitions, were Andrzej Gwiazda, a 46-year-old engineer from Gdansk and No. 2 official in the union; Marian Jurczyk, a 46-year-old warehouse manager who heads the union chapter in Szczecin; and Jan Rulewski, a 36-year-old construction engineer and leader of the Bydgoszcz chapter.

Both Mr. Gwiazda and Mr. Rulewski are regarded as militants in the leadership, meaning that they are less open to compromise on such issues as workers' participation in the management of industries.

Mr. Rulewski, a lanky, bearded man often thought of as a theoretician of the movement, spent three years of his childhood in a Siberian camp, where his father was sent as a Polish military officer.

Mr. Rulewski, who attended the military academy, spent four years in jail for desertion from the Polish Army. In March, he was one of three beaten up when police

### Communications

Trends in the fast-moving world of communications technology are examined in a special supplement that appears today on Pages T8-T12.

### Italian Fashion

&lt;p

## Russia Reportedly Proposes New Guidelines in U.S. Relations

By Bernard Gwertzman  
*New York Times Service*

WASHINGTON — The Soviet Union has proposed to the United States that the two countries seek agreement on a new set of principles to govern relations between them, with the stress on each side's pledging not to seek military advantage over the other, according to a senior State Department official.

In a briefing in New York on Wednesday morning, the official provided some additional details on Secretary of State Alexander M. Haig Jr.'s nine hours of discussions with Foreign Minister Andrei A. Gromyko on Sept. 23 and 28.

As was already made known, the two sides "held to the position they came into the talks with," the official said, "but both sides listened seriously to the other and neither refused to discuss issues raised by the other side."

He said that while the Russians stressed the value of a new agreement in principle on military equality, the Americans pressed for resolution of specific problems such as Afghanistan and Cambodia, and for an end to Soviet support for insurgency operations in Africa, Latin America and elsewhere.

### Number of Issues

Ever since the first meeting between the Soviet leader, Leonid I. Brezhnev, and President Richard M. Nixon in 1972, the Soviet side has pressed for agreements in principle on a number of issues.

In 1972, the two governments agreed to principles on relations between them, and in 1973 to a set of principles to avoid nuclear war. The introduction by Mr. Gromyko of the latest proposal, officials

said, was consistent with the past Soviet approach.

While the official did not dismiss the Soviet proposal out of hand, he did not welcome it either.

The Reagan administration, in the past, has been critical of the Soviet Union for failing to live up to the 1972 "basic principles," which called upon the two powers not to seek unilateral advantage over the other. Other officials said any new set of principles would have to be accompanied by concrete Soviet actions taking account of U.S. concerns.

The official said that the Soviet proposal, along with the U.S. concern about specific problems, would be discussed further when Mr. Haig and Mr. Gromyko meet again, probably in Geneva, early next year.

### 175 Targeted

The main achievement of the talks was the announcement that the two sides would resume negotiations on limiting medium-range nuclear forces in Europe on Nov. 30 in Geneva. But the official said "these talks will be very difficult and perhaps prolonged."

He said that the Soviet Union wants to limit negotiations to weapons systems with "defined European target capabilities." This means, he said, that the Russians want to include in the discussions only those SS-20 mobile missiles that are currently targeted on Western Europe.

The United States asserts that there are about 250 SS-20s now deployed in the Soviet Union, with about 175 currently targeted on Western Europe. Each SS-20 can be moved to another location and each launcher carries three warheads.

Previously, it was assumed by the United States that the Soviet Union agreed that the negotiations on medium-range forces, known as theater nuclear forces, would be "within the overall framework" of the Strategic Arms Limitation Talks. This was because the Soviet Union had contended it did not matter whether a missile was fired at the Soviet Union from Western Europe or the United States; it would be just as devastating.

"The Soviets have suddenly seemed to want to disassociate it from the process," the official said of a development in the Haig-Gromyko discussions.

Although there were no apparent breakthroughs or meetings of minds, the official said that it is now stalled. That will give the alliance a total of 572 nuclear warheads, less than the 750 already installed.

He said that Mr. Gromyko also wants to include in the negotiations the U.S. fighter-bombers based in Europe and on aircraft carriers. But he said that Mr. Haig maintained that the West was insisting on limiting the first round of negotiations to land-based missile systems.

"The Western allies have no missile system comparable to the SS-20," the official said, and will not begin to catch up with the Russians until 1983-84 when the first series of ground-launched Cruise missiles and Pershing-2 missiles are installed.

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"We focused on specific areas of contention."

Beyond discussions of principles, the Russians also raised questions about when the United States would resume the Strategic Arms Limitation Talks, about problems of trade discrimination against them and about "American rhetoric," the official said.

Mr. Haig told Mr. Gromyko that the second strategic arms limitation treaty, signed in 1979 but never approved by the Senate, was behind us and that a new basis for strategic arms control talks would have to be launched.

The Soviet side was told that the treaty "had failed on the rocky shoals of Soviet intervention in Afghanistan as well as on substantive deficiencies" in the document, he said.

As to the Soviet complaint about excessive rhetoric, Mr. Haig "underscored reciprocity," the official said, "suggesting that one side could not expect to be restrained if the other indulged in outrageous propagandistic patterns."

"clear in hindsight that the Soviets are fully aware in greater detail of precisely what our concerns are and the seriousness with which we hold these concerns."

### Haig's Complaints

Mr. Haig complained about Soviet support for Cuba, and there were disagreements over Afghanistan, Cambodia, China, Iran, the Gulf, Libya, the Middle East and Poland, the official said.

"The Soviet side seemed to be pressing for agreement on broad principles to govern our relations, with emphasis on equality in a broad sense, and especially in security terms," the senior official said.

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## Reagan Vows to Veto Budget-Busting Bills

By Robert C. Siner  
*International Herald Tribune*

den in the administration's economic policies were not true. "We assure you that the thrust of your economic program enjoys overwhelming support," the letter said.

Mr. Reagan blamed soaring interest rates on heavy government borrowing, adding that as his tax and spending cuts worked their way through the economy, with the expected generation of more revenue and less government spending, the pressure on the markets would ease and interest rates would come down.

### Kennedy Tax Cut

He cited the Kennedy administration's tax cut, which reduced taxes but brought added revenue to the government through increased economic activity, as an example of how his program would work.

Asked about the "social safety net" and whether his budget cuts would not hurt the poor, Mr. Reagan conceded that there would be some confusion and some mistakes but he insisted that the truly needy would be provided for.

He said that his administration had tried to find those areas where people had other income besides government assistance and in those areas to reduce the government benefit. But he emphasized that those who were totally dependent on the federal government would continue to receive their benefits.

### Other subjects

On other subjects, Mr. Reagan said that the prosperity of the nation had been hurt because the federal government was taking too great a percentage of the gross national product, doing things that government had no business trying to do.

He referred to the new \$1-trillion national debt ceiling, which he signed into law earlier Thursday, as "a monument to the policies of the past that brought it about — policies that as of today are reversed."

### Sees Optimism

In answer to questions, Mr. Reagan said that this change already had produced some of the economic optimism that his program is supposed to foster. He cited an announcement by the Iron and Steel Institute that the steel industry would undertake the largest program of expansion and modernization in its history, "based on their optimism with regard to our program."

The president also referred to polls showing support for the program and the overwhelming positive response to his speech of last week calling for a new round of budget cuts. He added that he expected better economic news as his program began to take hold.

Asked about the so-far negative response of the stock and money markets, Mr. Reagan produced a letter from the Securities Industry Association saying that allegations that the industry had no confidence in the market were unfounded.

He was hesitant about saying he would accept larger defense cuts than those already proposed.

He said that such cuts could threaten programs he deemed necessary for national security.

He supported an extension of the Voting Rights Act "in principle," calling the vote "a sacred right that must be upheld."

## U.K. Newspaper Union to Return to Work

By Steven Rattner  
*New York Times Service*

LONDON — Protesting printers at The Sunday Times voted Thursday night to end a dispute that had threatened the future of the London newspaper and that of its sister publication, The Times.

After a two-and-a-half-hour meeting, the 101 members of the National Graphical Association, whose demands for more men and more pay triggered the crisis, accepted an agreement negotiated by union leaders that amounted to virtual capitulation.

The men promised not to interrupt production and will not be paid for last Saturday, when the paper was shut down. Their demands will be discussed in joint talks with a union of pressroom assistants.

Len Murray, general secretary of the Trades Union Congress, described the settlement as "honorable and practical," but it clearly constituted a victory for Rupert Murdoch, owner of Times News-

papers Ltd., who is fighting to trim the company's losses of nearly \$5 million (\$9 million) in July and August.

For his part, Mr. Murdoch said

he was delighted that "common sense has prevailed," but he warned that if any production disturbance occurred, "the people concerned would be dismissed without further warning."

### Threat to Close

On Wednesday night, the men rejected the same offer, which had been negotiated with national leaders late Tuesday. But on Thursday morning, the 50-year-old Australian publisher, refining earlier intimations, warned that he would close the paper by Monday if an agreement was not reached.

"Murdoch finally convinced them he would shut the paper down," said Tom Baistow, a London-based lawyer and writer on the press. "Other unions began to see their jobs disappearing." In buying the paper, Mr. Murdoch insisted on reductions in the work

shutdown.



Rupert Murdoch

## Iran Electing New President In Spite of Crash, Violence

From Agency Dispatches

BEIRUT — Ayatollah Ruhollah Khomeini's government pushed ahead Thursday with plans to hold the nation's third presidential election on Friday, despite a campaign of street violence apparently aimed at discouraging a heavy voter turnout.

The elections, to take place a day after state funerals were held for four top military commanders who were killed in a plane crash, were expected to result in an overwhelming victory for Hojatoleslam Ali Khamenei, the secretary-general of the ruling Islamic Republican Party.

Four lesser-known candidates, all Khomeini loyalists, were also on the ballot in the elections to choose a successor to President Mohammed Ali Rajai, who was killed along with Premier Mohammed Javad Bahonar in a bombing on Aug. 30.

However, one of those on the

ballot, Premier Mohammed Reza Mahdavi Kani, pulled out of the race on the eve of the election, Tehran Radio reported Thursday night. The radio gave no reason for the premier's decision, but he had said earlier that he intended to vote for Mr. Khamenei because he was the best man for the job.

### Supported by Rivals

Mr. Khamenei, 42, is the former leader of the Friday prayers in Tehran. He has won support from the other candidates, who, it is acknowledged, are in the race only in case Mr. Khamenei drops out.

Coffins of the four military commanders were paraded through Tehran streets Thursday during a state funeral attended by a million mourners, a government information official said.

The official, who did not give his name, said when reached by telephone from Beirut that a government statement reported 41 of the 100 persons aboard the U.S.-made C-130 transport plane died in the Tuesday night crash in a Tehran suburb.

### Commanders Killed

Local Revolutionary Guard commanders in key cities of southern Iran on the front line of the war with Iraq were killed in the crash. Iran's main newspaper, Islamic Republic, reported Thursday. Also killed were Defense Minister Mousa Namini; the armed forces chief of staff, Maj. Gen. Valiollah Fallahi; the former air force chief, Col. Javad Fakuri; and Mohsen Kolahdouz, the acting Revolutionary Guard commander.

The coffins, draped in Iran's flag, were borne through streets in cars while the crowd chanted "death to America" and "the hypocrites must be executed," the official said.

"Hypocrites" is the term used by Ayatollah Khomeini's regime for the leftist Mujaheddin Khalq guerrillas who have been waging a campaign of assassinations and bombings to bring down the regime. The Mujaheddin was not blamed for the plane crash.

Said to Lack Fuel

The Tehran newspaper Kayhan on Thursday quoted officials as saying the plane had run out of fuel and crashed before it could make an emergency landing.

Ayatollah Khomeini on Thursday appointed Col. Ghassem Ali Zahir-Nejad as chief of staff of Iran's armed forces, replacing Gen. Fallahi, and named Col. Ali Sayyed Shirazi to replace Col. Zahir-Nejad as ground forces commander.

In Paris on Thursday, the exiled former president, Abolhassan Bani-Sadr, and Massoud Rajavi, leader of the Mujaheddin, announced they had formed a "transitional government" headed by Mr. Bani-Sadr with Mr. Rajavi leading a National Council of Resistance for the Independence and Freedom of the Democratic Islamic Republic of Iran.

They promised equality, land reform, autonomy for Kurdistan, elimination of the Revolutionary Guard and a new judicial system to replace the "Khomeini courts," which they said they "emphatically condemned."

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The spokesman for the IMF said in a prepared statement: "No such discussions have taken place, nor are any planned. The managing director of the IMF will have no discussions on such a matter when he visits China in late October."

## WORLD NEWS BRIEFS

### Brezhnev Welcomes New Arms Talks With U.S.

United Press International

MOSCOW — President Leonid I. Brezhnev on Thursday welcomed talks on nuclear arms limitation in Europe with the United States and vowed to negotiate in good faith.

"The Soviet Union is ready to conduct these talks earnestly, fairly and constructively, strictly adhering to the principle of equality and equal security of the sides," Mr. Brezhnev said in his first comment since the arms talks, scheduled to start Nov. 30, were announced last week.

Mr. Brezhnev's brief remarks were made during a Kremlin meeting with Didier Ratsiraka, visiting president of the Malagasy Republic. Mr. Brezhnev and Mr. Ratsiraka exchanged views on several wide-ranging subjects, the news agency Tass said, but paid particular attention to the situation in the Indian Ocean. They cited a U.S. military buildup there, Tass said.

### Egypt Asks U.S. to Provide Weapons for Sudan

Reuters

CAIRO — Egypt is appealing to the United States to provide Sudan with arms because of the risk of Soviet-Libyan intervention there, Defense Minister Abd el-Halim Abu Ghazala said Thursday.

He told reporters that the appeal was contained in a message sent to President Reagan from President Anwar Sadat. Gen. Abu Ghazala said the situation on Sudan's western border with Chad was very serious. Earlier this week, Sudanese officials said Libyan planes operating out of Chad had been making almost daily raids there.

"We think the Soviets and Libyans are going to do something through the borders with Chad in order to divert attention from something that may happen in Poland," Gen. Abu Ghazala added. Libyan troops intervened in Chad last December to help government forces quell a revolt by rebels who now have bases near the Sudanese frontier. Like Egypt, Sudan has bitter relations with the Libyan leader, Col. Muammar Qaddafi.

### China Reportedly May Seek \$6 Billion IMF Loan

Reuters

WASHINGTON — China has raised the possibility of borrowing more than \$6 billion from the International Monetary Fund, sources said Thursday.

Discussions about the loan, which if formally requested would be the largest ever considered by the IMF, were in the very early stages, the sources said, and it was uncertain whether the Chinese would press the issue.

A spokesman for the IMF said in a prepared statement: "No such discussions have taken place, nor are any planned. The managing director of the IMF will have no discussions on such a matter when he visits China in late October."

### U.K. Labor Party Votes for EEC Withdrawal

The Associated Press

BRIGHTON, England — The Labor Party committed itself Thursday to pulling Britain out of the European Economic Community if it regains power.

"Nine years of membership in the EEC have not brought us the glittering prizes so glowingly promised, no boom to British industry, no increase in employment and no greater say in world

## Israel's Desire for a Strategic Relationship With U.S. Is Taken More Seriously Than Ever

By David K. Shipler  
New York Times Service

JERUSALEM — For years, Israel has tried to sell itself as a "strategic asset" to the United States. Boasting a crucial location, sophisticated military power and a singular stability in the Middle East as a pro-American activist, Israel has wanted very much to be treated by Washington as an ally.

Now that proposed relationship has been defined more precisely by the Israelis than ever before, and the United States is listening more seriously to the suggestion than under any previous administration.

During Prime Minister Menachem Begin's visit to the United States in September, Defense Minister Ariel Sharon is reported to have given U.S. officials a long list of ideas for "strategic collaboration," as the concept was termed later by Secretary of State Alexander M. Haig Jr. U.S. military officers made no commitment on any of them, but were said to have

shown considerable interest in a few suggestions, especially those related to the United States' prospective Rapid Deployment Force.

The central idea is to stockpile or pre-position, heavy artillery.

### NEWS ANALYSIS

tanks, armored personnel carriers, ammunition, medical supplies and other equipment for quick pickup by U.S. troops being flown in to deal with an emergency in the Gulf.

Israel does not want U.S. troops based on its territory. Military men here believe that would be psychologically debilitating, creating in Israelis an unhealthy sense of dependence on outsiders for the country's defense.

But Mr. Sharon, who refused to be interviewed, said to have offered to store large quantities of U.S.-owned weapons — including tank ammunition that would be manufactured by Israel and sold to the United States — to maintain

the equipment for a fee, and to defend it from attack.

This has brought criticism from some in the opposition Labor Party, who argue that the Israeli Army and Air Force should not be committed to any defense except Israel's. Others are concerned that in becoming a link in a U.S. Middle East force, Israel becomes a logical target in any thrust by the Soviet Union.

Nevertheless, officials in Mr. Begin's government see several strong advantages for Israel in such an arrangement. First, masses of U.S.-owned arms on Israeli soil would presumably be available to Israel in case of a local war with the Arabs, reducing the acute problems of resupply and airlift that arose in the war of 1973.

Second, the economic hardship of maintaining a huge military establishment would be partially relieved by Israel's selling equipment to the United States for stockpiling and by U.S. payments to Israel for maintaining the stockpiled weapons.

This could mean millions of dollars annually, officials say.

Third, Israel is concerned by the expanding influence of the Soviet Union in the Middle East and is anxious to support any American effort to contain it. "We would be able to change the Americans' capability in this area in one year," said a well-placed Israeli officer.

Fourth, Israel believes that such ties would give the United States a real stake in Israel's survival, an interest more tangible than any moral commitment or ideological affinity in making sure that Israel remains strong enough to defeat an Arab attack.

The U.S. perspective on strategic cooperation is somewhat mixed. The major reservations derive from the problems that close military links with Israel cause for American ties with the Arab countries, all of which except Egypt are hostile to Israel. In its zeal to combat Soviet expansion, however, the Reagan administration appears more willing than past administra-

tions to overlook the potential damage to U.S.-Arab relations.

In strict logistic terms, Israel has significant advantages for the United States as a place to stockpile equipment. A recent study by U.S. experts for the Pentagon found that simply because of geography, arms stationed in Israel could be flown relatively quickly either to the Gulf or to Western Europe, meaning that whatever was stockpiled in Israel could also be considered for potential NATO use.

### Times to Europe

Using half the U.S. strategic airlift ability, the study calculated, it would take 11 days to transport 70,000 tons of equipment for one mechanized division from Israel to Dhahran, Saudi Arabia, compared with 10 days from the Egyptian port of Ras Banas, eight days from Oman, 14 days from Somalia, 22 days from Kenya, 27 days from Diego Garcia, and 77 days from the United States.

The time to Munich, using the entire airlift ability, would also be 11 days from Israel, but these are the times for the other locations: 12 days from Ras Banas in Egypt, 20 days from Oman and Somalia, 23 days from Kenya, 29 days from Diego Garcia, and 34 days from the United States. The Pentagon has negotiated to set up stockpiling sites in Egypt, Oman, Somalia and Kenya, and has an Indian Ocean base at Diego Garcia.

Only Egypt and Israel could provide defense, the report said. Elsewhere, the United States would have to deploy its own jet fighters. One option is to make Diego Garcia the sole site for Gulf action, as the strike range of Soviet aircraft stationed in Afghanistan as well as the increasingly sophisticated air force of Southern Yemen, yet the host government cannot provide air defense, it said.

A U.S. specialist visiting here recently said that Israel is a more highly developed technological society than the Arab countries, also

offered important services. Israeli maintenance of weapons, for example, was considerably more efficient and reliable, and less costly, than U.S. maintenance. Medical facilities are more advanced than in the other Arab nations, and since Israel has overbuilt hospitals to accommodate the wounded, some space and equipment might be used by U.S. troops on a contractual basis.

Detailed staff work and further high-level discussions are scheduled this fall, with a memorandum of understanding to be signed after Mr. Sharon visits Washington again in November. Some U.S. officials have said that a congressional defeat of the administration's proposed sale of Airborne Warning and Control Systems (AWACS) planes to Saudi Arabia would jeopardize "strategic collaboration" with Israel, although in the longer run the impression here is that a relationship seen in the American interest will be pursued by Washington.

Both sides have apparently recognized that if ties develop strongly, a certain restraint may be placed on Israeli military behavior. This has been one of the selling points of the proposal within the Reagan administration, and Israeli officials have talked about it among themselves, noting, one said, to the realization that in such a partnership, "we'll have to take into account American interests in this area in a more careful way."

What this would mean is unclear. Would Israel consult the United States before bombing an Iraqi reactor? Would Israel refrain from hitting Palestinian headquarters in Beirut if Washington objected in advance? From all that has been said so far, the implied answers are yes.

But no Israeli will feel comfortable trading away any maneuverability on matters of its own security. And here lies a potential source of conflict over the entire plan, both within Israel's domestic politics and between the Begin and Reagan governments. The more specific the policy implications are made, the more difficult agreement will become. The prospect depends on a certain vagueness.

The states will not get as much money or flexibility as they had hoped to get with the new "block grants," which consolidate 57 special-purpose programs under nine broad headings. "Block grant" is really a euphemism for cuts in federal spending, said John S. Murray, a Republican state senator in Iowa.

Some state officials have reached the conclusion of Kalman R. Hetschman, Maryland's secretary of human resources, who said: "The provisions of the Reconciliation Act go much further in their impact than temporary reductions in federal aid to achieve short-term economic goals. Fundamental responsibilities are being shifted to the states, reversing 50 years of national bipartisan policy that recognized the basic duty of the national government to pay the costs of income maintenance and social services programs."

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Some state officials have long wanted to impose more stringent work requirements and to check more closely on the eligibility of those receiving assistance.

Leo T. Hegstrom, director of the Oregon Department of Human Resources, said that the federal budget cuts had forced the state to "re-prioritize" to decide which programs should be preserved and which curtailed.

Officials said the Omnibus Reconciliation Act, signed by the president Aug. 13, would save \$35.2 billion in a budget that exceeds \$700 billion in the coming year.



## Reported Approval of MX Criticized in U.S.

By Richard Halloran  
New York Times Service

WASHINGTON — Opposition to President Reagan's reported, but unconfirmed, decision to deploy MX intercontinental missiles in Nevada has mounted here even though the president is not scheduled to make public his decisions on a comprehensive new package of strategic weapons until Friday.

The White House's disclosure Tuesday that Mr. Reagan plans to announce his decisions Friday triggered new expressions of optimism and a fresh round of speculation Wednesday on what they would include, a leading candidate being the shuttling of 100 MX missiles among 1,000 shelters in the Nevada desert in what has been termed the "shell game" approach.

Backed by Garn

But Sen. Paul Laxalt, Republican of Nevada, a close friend of the president, issued a statement saying: "I've been assured by the White House that reports of 100 missiles to be located in 1,000 shelters in southern Nevada are not true."

Sen. Laxalt was supported by Sen. Jake Garn, Republican of



This is an artist's cut-away drawing of the MX missile in flight. The missile is to carry 10 warheads, weigh about 192,000 pounds, and be 92 inches in diameter and 71 feet in length.

Utah, a state also rumored to be part of the deployment scheme. Sen. Laxalt and Sen. Garn opposed the "shell game" project last spring, insisting it was vulnerable to Soviet attack.

Other opposition came from Gov. Robert List of Nevada, who said during a television interview: "We don't think it makes good sense militarily. We feel very clearly it would just turn our landscape and lifestyle upside down."

Rep. Les Aspin, Democrat of Wisconsin, a longtime critic of the military, said: "This sounds

opposed the "shell game" even if it was not in his state.

"If it's true," he said, "it's a poor selection, a poor choice."

More opposition came from Gov. Robert List of Nevada, who said during a television interview: "We don't think it makes good sense militarily. We feel very clearly it would just turn our landscape and lifestyle upside down."

Rep. Scott M. Matheson of Utah, a Democrat, said that he

like the kind of system Moscow would choose for us to buy. Why on earth should we build such a folly? Even if we get it for free, it's a disastrous step backward."

Along with the reports on the deployment of the MX were reports that the president had decided to build a variant of the B-1 long-range bomber, a project that had been canceled by President Jimmy Carter in 1977. The B-1 program reportedly would proceed until the more advanced Stealth bomber, with its ability to evade radar, had been developed.

And not just the poor will be affected. Congress tightened the eligibility standards for middle-income and upper-income families who look to the government for help in financing the college education of their children through guaranteed loans.

## Reagan Economic, Social Policies Now Will Be Put to the Fiscal Test

By Robert Pear  
New York Times Service

WASHINGTON — Now that most of the budget and tax reductions that President Reagan won from Congress have gone into effect with the start of the new fiscal year Thursday, his economic and social policies will finally be put to the test.

After more than eight months of intense public debate over the major social programs, Americans will start feeling the effects of the cuts. For there are strong indications that most states will not increase their spending to compensate for the loss of federal money.

Poor people and those just above the poverty line, especially those also employed, will be most affected. Some welfare recipients will get smaller checks — or no checks at all — in the mail this week. Some people will become ineligible for Medicaid, and several million will receive smaller allotments of food stamps. And when new regulations can be issued, rents will rise for 2.4 million families living in subsidized or public housing.

And not just the poor will be affected. Congress tightened the eligibility standards for middle-income and upper-income families who look to the government for help in financing the college education of their children through guaranteed loans.

Congress also reduced cash subsidies for the school lunch program and established more restrictive standards for determining whether children receive free or reduced-price meals. Children from all but the poorest families may have to pay somewhat more for lunch.

Also, the first phase of Mr.

Reagan's "supply side" tax cut starts with a 5-percent reduction in withholding taxes. This will put

money into the pockets of 100 million working Americans.

A new 12-month savings certificate went on sale Thursday at banks, savings and loan associations, credit unions and other financial institutions. It is designed to aid the nation's ailing thrift industry by allowing individuals to earn \$1,000 and married couples up to \$2,000 a year in tax-free interest. The certificates are expected to bring \$250 billion in deposits to financial institutions.

So far, Mr. Reagan has fended off criticism of his economic recovery program by noting that "it doesn't go into effect until Oct. 1." But now his economic, social and political philosophy will be put to the test. That philosophy buckles two trends: the continuing growth of social welfare programs since the New Deal and the concentration of decision-making power at the federal level.

Studying the budget cuts, many state officials have reached the conclusion of Kalman R. Hetschman, Maryland's secretary of human resources, who said: "The provisions of the Reconciliation Act go much further in their impact than temporary reductions in federal aid to achieve short-term economic goals. Fundamental responsibilities are being shifted to the states, reversing 50 years of national bipartisan policy that recognized the basic duty of the national government to pay the costs of income maintenance and social services programs."

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## Reagan Wins 2 Foreign Policy Victories

By Bill Peterson  
Washington Post Service

WASHINGTON — The Senate has handed President Reagan two important foreign policy victories, voting to repeal a 1976 provision prohibiting aid to any faction in Angola's civil war, and to permit aid to Argentina, banned for human rights reasons since 1978.

With Republicans saying the administration has no current plans to supply such aid, the Senate on Wednesday repealed the so-called Clark amendment, passed five years ago in an effort to prevent U.S. intervention in the southern African nation. It was named after former Sen. Dick Clark, Democrat of Iowa, who proposed it for fear the government would otherwise jump in on the side of Angola's anti-Marxist rebels.

The Clark amendment is one of a number of foreign policy restrictions that Congress placed on the president in the years just after the war in Vietnam and that the Reagan administration now wants removed.

"If we're a world power, and I think we are, we need the muscle in the president's office to act like a world power," said Sen. Barry M. Goldwater, Republican of Arizona.

The key vote occurred on an amendment by Sen. Paul E. Tsongas, Democrat of Massachusetts, that would have kept the Clark amendment in force until March 31, 1983, or until a cease-fire is reached in the civil war in neighboring South-West Africa (Namibia), which would substantially reduce tensions in the region generally.

The Tsongas amendment was defeated, 66-39. The Senate then voted by voice vote an amendment by Sen. Nancy L. Kassebaum, Republican of Kansas, that would permit aid, but still not without the prior approval of Congress.

Whether the Kassebaum language will ever become law, however, remained unclear. It was attached to the foreign aid authorization bill, and there are serious doubts as to what kind of foreign aid bill the House will pass this year, or if it will pass any. The version of the bill approved by the House Foreign Affairs Committee thus far contains the Clark prohibition.

Democratic leaders have indicated they will not bring the full bill to the House floor until 125 Republicans agree to support it. They do not want to lead the fight for unpopular foreign aid programs, and then have the Republicans sandbag them.

The debate Wednesday centered on what kind of signal repeal

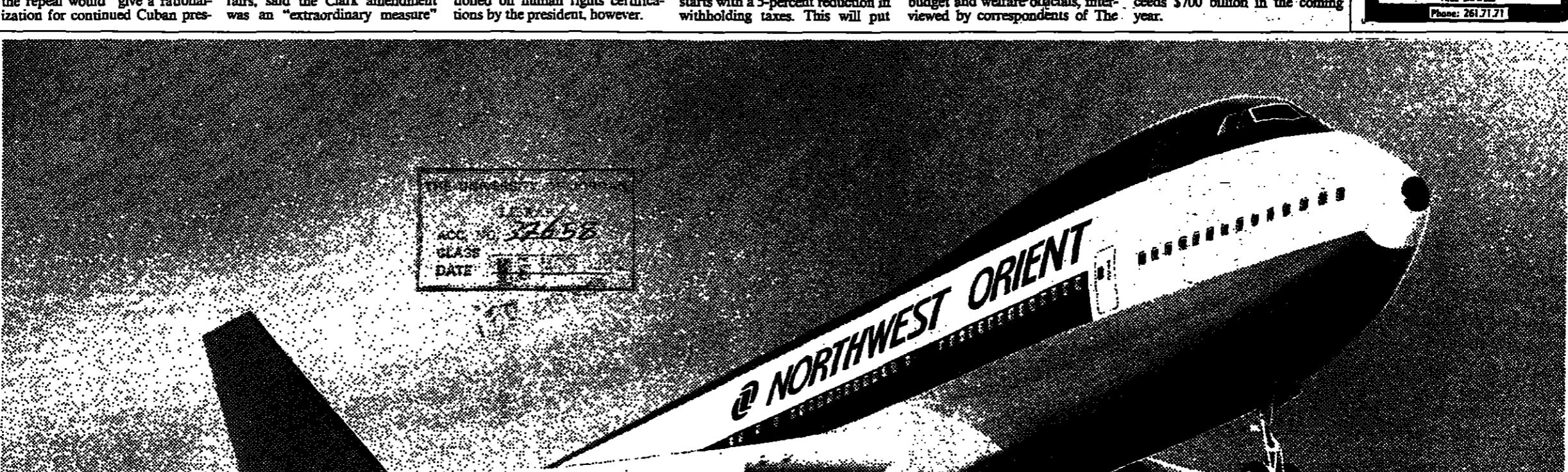
would send, and how it would affect the ongoing peace negotiations in South-West Africa. Sen. Tsongas and other opponents argued it would endanger the negotiations and signal that the United States no longer supports a policy of restraint in black Africa.

Sen. Claiborne Pell of Rhode Island, the ranking Democrat on the Foreign Relations Committee, said the Clark amendment was an "extraordinary measure"

enacted during an "extraordinary time," the post-Watergate, post-Vietnam era.

The Argentine amendment, also adopted by voice vote, dropped the provision in the committee bill that would have linked military sales and aid to a full accounting by the Argentine government of thousands of "disappeared" persons.

Aid would still be conditioned on human rights certifications by the president, however.



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## In Greece, Left Coiled for Victory, But Right Says It Still Could Win

New York Times Service

ATHENS — Opinion polls suggest that Greece will turn to the left in elections this month and install the Socialist leader Andreas Papandreou in power. But Premier George Rallis insists that his conservative camp is an "awakening giant" that will prevail.

Mr. Papandreou has sought during the campaign for the Oct. 18 election to counter attempts to portray him as a revolutionary Marxist. Tempering his more radical earlier views, he is competing with the premier for the backing of Greece's centrist voters in this country of about 10 million people.

"We are the party of change, of national and social rejuvenation, not of upheaval as our opponents want to portray us," the 62-year-old Socialist leader said at one of his huge rallies.

For Mr. Papandreou, son of a former centrist premier, the late George Papandreou, this will be the third attempt to gain power since the rule of the Greek colonels was ended in 1974. In elections in 1977, his Panhellenic Socialist Party doubled its share of the vote, reaching 26 percent, and tripled its

representation in Parliament, raising it to 94 of the 300 seats.

Mr. Papandreou, a former professor of economics at the University of California, predicts victory this time with more than 50 percent of the vote and promises "reforms which the country has not experienced since Greek independence in 1821."

He continues to say that it is "preposterous" for Greece to be tied to the North Atlantic Treaty Organization because doing so "means deploying our forces in a way that makes us naked toward the east, toward Turkey."

But sources close to him maintain that Mr. Papandreou has decided, if elected, not to move quickly to pull Greece out of NATO or close down the four American bases in the country.

They say that he is wary of possible displeasure in the military and of upsetting the international balance of power, and that he realizes there is no easy alternative source of arms supplies. The United States supplies Greece with 90 percent of its military equipment.

His associates describe Mr. Papandreou as preparing the ground for a tougher negotiating stance

with the West. They also say that he has abandoned earlier plans to seek the outright withdrawal of Greece from the European Economic Community and has decided to move instead for a renegotiated special relationship or a referendum on membership.

### Plans for Industry

His party's principal appeal derives from its domestic policy. He has called for strict separation of church and state, the institution of civil marriage, changes in education and improved health care.

Avoiding the term nationalization, he has called for "socialization" or increased worker participation, in 12 key fields, among them banking and insurance, shipbuilding, energy production, mining and defense-related industries.

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## Researchers Take Good Looks At Blood Pressure and Jurors

The Associated Press

NEW YORK — Researchers, in unrelated studies reported in the October issue of Psychology Today magazine, indicate that having plain looks can affect the blood pressure of teen-age girls, and that handsomeness affects the way jurors regard victims and suspects.

A study at Johns Hopkins University, led by Stephen Hansell, concluded that having plain looks can raise a teen-age girl's blood pressure. The study of 283 women and 369 men between the ages of 14 and 76 found no relationship between physical attractiveness and blood pressure among boys or grown women or men.

But "female high school and college students who were rated in the top 50 percent for attractiveness had significantly lower blood pressure than girls rated in the bottom 50 percent," the experimenters reported. "In one study, the pressure averages were 119-75 for the pretty women and 125-80 for the ugly ones. The strain of being judged by one's looks, the researchers infer, is particularly savage for teen-aged girls," the magazine reported.

In the other study, mock jurors — 60 male and 60 female under-graduates at the University of Dayton — gave more sympathy to handsome "rapists" and attractive "victims" than to others.

Each student read the same account of a rape case, but each was shown one of four different sets of photographs — an attractive defendant with an attractive victim, an attractive defendant with an unattractive victim, an unattractive defendant with an attractive victim, and one in which both defendant and victim were unattractive.

"Women were less likely to believe any defendant's testimony than men were," psychologist Marsha Jacobson reported. "But both men and women showed greater confidence in it when it came from an attractive man. The students reported more sympathy for the handsome suspect than for the homely suspect, less sympathy for the unattractive victim than for the more attractive one."

"Asked to mete out justice, 82 percent of the students who encountered an unattractive suspect found him guilty, compared with 57 percent who found an attractive suspect guilty," the magazine said. "Both defendants were more likely to be found guilty when paired with the prettier victim."



United Press International  
KORCHNOV MOVE — Anatoly Karpov, right, the world chess champion, and Viktor Korchnoi, during a draw for the first move in the world championship Thursday in Merano, Italy. Mr. Korchnoi, a Soviet defector, moved white first, QBP-B4. Mr. Karpov, of the Soviet Union, defeated Mr. Korchnoi in their 1978 meeting, characterized by recriminations.

## Ex-Revolutionary Visits White House Aide

By Lee Leiserson  
Washington Post Service

WASHINGTON — Régis Debray, the former Marxist revolutionary and apostle of Che Guevara, has paid a call on the Reagan White House — demonstrating that diplomacy, too, makes strange bedfellows.

In an unannounced visit that French officials will not discuss, Mr. Debray, who is a foreign policy adviser to President François Mitterrand of France, stopped by Saturday at the White House office of Richard V. Allen, President

"I don't think we can say anything about Régis Debray," a French Embassy spokesman said

when asked about the visit.

"One could think that Debray is a terrorist if one is on the other side."

In 1967, Mr. Debray, then an advocate of violent revolution, entered the Bolivian jungle to find Guevara, who had dropped from sight two years earlier. Bolivian authorities killed Guevara and arrested Mr. Debray, sentencing him to 30 years in prison. Mr. Debray had served only three years of his prison term when he was released after appeals from French and other intellectuals.

Since then, he has abandoned his militant Marxist positions in favor of membership in the French Socialist Party and has repudiated some of his earlier writings. But it is known that the presence of Mr. Debray as an adviser to Mr. Mitterrand, concentrating on Latin American affairs, has annoyed some U.S. officials.

"Some people would find it strange that a Dick Allen and a Régis Debray are meeting," Mr. Allen remarked. "I've followed Régis Debray for 15 years. Nothing he could say would surprise me. We know quite a bit about each other."

Mr. Allen said that Mr. Debray had requested the meeting and that it was very cursory. In an exchange for which the diplomatic phrase "agree to disagree" would be an understatement, Mr. Allen told Mr. Debray what Mr. Reagan's positions are, and Mr. Debray said some of his positions.

long pause: "Not exactly a secret, but it was a private, very private and short visit."

The past of Régis Debray is very symbolic," the spokesman said. "One could think that Debray is a terrorist if one is on the other side."

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## China Prods Taiwan To Accept Unification

From Agency Dispatches

PEKING — China celebrated its National Day on Thursday by demanding more hard work from its citizens and calling for a positive response from Taiwan to its new reunification proposal.

People flocked to parks in the capital as the nation took a public holiday that in some cases will last until Monday.

The Chinese Communist Party newspaper People's Daily said in an editorial marking the 32d anniversary of the Communist victory over the Nationalists in 1949 that the party would not keep changing its policies as it had mistakenly done in the past.

### No More Changes

"There will be no more changes," it said. "It is time to get down to work and work harder and still harder. The guiding lines have been set, and there will be no more changes."

The editorial indicated that China seriously wants a stable political program, free from the sharp swings of the past that disrupted progress and disenchanted the people.

It said the party and government's apparent inability to pick a course and stick to it during the recent past had aroused deep cynicism in the people, who tend to ignore state affairs and avoid showing too much enthusiasm for fear of reprisals after another swing of the political pendulum.

"We shall not from now on commit that kind of mistake any more," the People's Daily said. "Quite a few things have to be really well done in a definite period. This is more important today than ever. When this is done, people will trust us, morale will rise and the party's style of work will truly be changed."

Referring to a new initiative launched Wednesday to entice the Nationalists to discuss reunification,



tion with the mainland, the newspaper said China hoped Taiwan President Chiang Ching-kuo would respond positively.

In Peking's Tiananmen Square, the usual huge portraits of Marx, Engels, Lenin, Stalin and Sun Yat-sen, who founded the republic that toppled the last emperor in 1911, were put up for the occasion under the more permanent gaze of Mao.

China's new Taiwan initiative offers the Nationalists an unspecified role in the leadership of China and proposes talks between the Communists and Nationalists.

## Rescue Team Set If a Need Arises, U.S. Colonel Says

United Press International

WASHINGTON — The United States has a rescue team ready to respond quickly to hostage situations similar to the seizing of diplomats in Tehran, according to the commander of ground forces in the aborted Iran rescue mission.

Col. Charles Beckwith said the United States had not been prepared to move fast to rescue the Americans captured in the Nov. 4, 1979, embassy seizure "for two reasons — a lack of intelligence and we didn't have a team put together."

"And now I'm happy to say — I will not discuss any of the details of this — I'm happy to say we've got a team together now," Mr. Beckwith said in a television interview Tuesday.

"Now we've got a team of aviators," he said. "Of course, the Delta force has always been cocked and loaded, among others, and we have a team ready to go. So now, sort of, the ball's in the intelligence court."

Col. Beckwith, who has said he will retire this fall, led the Delta force unit of the Army's Black Hawk team stationed at Fort Bragg, N.C. He talked about the rescue team when it asked if Beckwith had misconceptions about the unsuccessful raid, which took place on April 24, 1980.

## Whatever the news



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## An International Herald Tribune/Forex Research Conference on:

## How to Manage Foreign Exchange Risks

Paris November 23-24

Jacques Delors, Minister of Economy and Finance of France, and Governor Henry Wallich of the U.S. Federal Reserve Board will be featured speakers at the seventh International Herald Tribune/Forex Research conference on "The Management of Foreign Exchange Risks," to be held November 23 and 24 at the Grand Hotel in Paris.

Designed to assist financial directors in solving the complex foreign exchange

problems they encounter daily, this two-day working conference will include presentations by senior financial officials from leading international corporations, including: Nestle, Mobil Oil, Rousset Uclaf, BMW, Charbonnages de France Chimie, Davy Corporation, Dixons Photographic, Polaroid (Europe) and Philips Gloeilampenfabrieken.

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### CONFERENCE REGISTRATION FORM

Please enroll the following participant for the conference to be held November 23 and 24, 1981 in Paris.

Fees are payable in advance of the conference. Each participant: FF 3,500 or the equivalent (plus 17.60% IVA for registrations from France). Fees will be returned in full for any cancellation that is postmarked on or before November 6, 1981.

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Please reserve accommodations for the nights of November 22 and 23:

Single (FF 378 per night, breakfast and tax incl.)  
 Double (FF 432 per night, breakfast and tax incl.)

A block of rooms has been reserved for participants at preferential rates on a first-come, first-served basis. Reservations must be received by November 13 with a check for the first night.

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First Name \_\_\_\_\_  
Position \_\_\_\_\_  
Company \_\_\_\_\_  
Address \_\_\_\_\_  
City/Country \_\_\_\_\_  
Telephone \_\_\_\_\_ Telex \_\_\_\_\_

Return to: Service Central des Réservations  
Direction commerciale  
Forex Exchange Conference  
Grand Metropolitan Hotels  
12, Boulevard des Capucines  
75009 Paris  
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## Iran's Firing Squads

The Iranian government is now struggling to preserve itself and its power by a ruthless resort to its firing squads. But the counter-campaign of assassination of government officials continues at a staggering rate. This week a plane crash killed several of the military commanders and, perhaps more significantly, the head of the Revolutionary Guard, the clerical government's chief instrument of civil control. The reports from Tehran deny any evidence of sabotage, but you are not required to accept that as necessarily the last word. Like the earlier bombings, these deaths are very likely to be followed by another wave of executions of the government's enemies, real or suspected.

Iran's government is trying to carry out a purge of increasing magnitude, and its opposition is clearly fighting back with extraordinary ferocity. The course of these events is difficult to follow in any detail; all international news organizations but one, the Agence France-Presse, have been ejected from the country. But the scale of the violence is evident even from the fragmentary reports available. There has been open street fighting in many parts of the country, with a notably savage outburst in Tehran last weekend. Inevitably, the Kurds have seized the opportunity to re-open their perennial rebellion in the northwest.

The immediate danger is, as always, an even more pervasive civil war leading to the collapse of all central authority in Iran. The

struggle between the clerical right and the revolutionary left is already interwoven with the much older, and historically intractable, conflicts of religious sect and ethnic loyalty. Demographically, the country is a central core of ethnic Persians — about half the population — surrounded by a rich variety of peoples with other languages, other customs and, very often, other national allegiances. It was held together for a time by the shah's military power. But the present role of the army is particularly difficult to assess. It responded more competently to the Iraqi invasion than seemed possible a year ago, and in the past few days has even won back some territory. But the army's political intentions, if any, and even its capability to exert power within the country, are only question marks.

When the Iraqi invasion began, a great wave of panic swept over the Gulf region. The governments there vary only in degrees of fragility. The combination of great wealth and weak defense forces is not conducive to serenity even in the most peaceful of times. The level of anxiety temporarily subsided as the invasion seemed to settle into a stalemate. But Tehran's daily announcements of mass executions now seem to indicate that over the past two weeks the violence within the country has entered an entirely new stage. It reminds Iran's uneasy neighbors that if the worst happens and civil war becomes general, it can become contagious.

THE WASHINGTON POST

## Pakistan Going Nuclear?

On the eve of the Senate vote on whether to exempt Pakistan from a restriction that prohibits aid to countries developing nuclear weapons, Sen. Alan Cranston has revealed some alarming news. He says, and the administration confirms, that there has been an increasing number of "anomalies," "irregularities" and unexplained breakdowns in the monitoring devices at Pakistan's Canadian-supplied reactor.

A few weeks ago, these led the director of the International Atomic Energy Agency, Sigmund Eklund, to take the — for him — extraordinary step of saying he could no longer vouch for the integrity of the IAEA's nuclear safeguards there. Mr. Eklund, you may remember, had such great faith in the IAEA's safeguards system that he brushed aside any suggestion that Iraq could misuse its reactor, only to be later flatly contradicted by an IAEA inspector and several independent nuclear experts. If Mr. Eklund is worried about what Pakistan is doing, that is a plain sign that there is plenty to be worried about.

U.S. administration officials confirmed some months ago that Pakistan has been making swift progress on a clandestine reprocessing plant and appeared also to be readying a nuclear test site. The missing link had been where Pakistan would get the spent fuel to reprocess for its plutonium. The new information supplies that link.

Though the details are secret, Pakistan is

reportedly adding nuclear fuel rods, made in its own unsafeguarded fabrication plant, to the safeguarded reactor and then, after the rods are irradiated in the reactor, removing them from the safeguarding system. There is enough "suspicious" activity to worry American intelligence agencies and the IAEA. Such fuel rods would constitute a plutonium stockpile, ready to be reprocessed whenever the reprocessing plant is ready.

In asking Congress to approve Pakistani aid, the administration never denied that Islamabad has nuclear intentions. But Undersecretary of State James Buckley testified he had "assurances" from its president that Pakistan did not intend to develop nuclear weapons, and he said he had made it clear in direct talks with Pakistani officials that the United States would not accept any distinction between a nuclear weapons test and a "peaceful nuclear explosion."

The administration strenuously opposes attaching any nuclear conditions to the aid package. It refused to state, at least publicly, that aid would be withdrawn in the event of a nuclear test. Its argument is that the rapid supply of F-16s and other advanced weapons would relax Pakistan's security fears and bring enough leverage to dissuade Pakistan from its nuclear course. The burden is squarely on the administration's shoulders to use that leverage now.

THE WASHINGTON POST

## The Clouded Missile 'Window'

President Reagan is said to have decided to build at least some MX missiles and B-1 bombers and to announce it only after his Thursday press conference. He would be wiser to heed John Kennedy's example and ditch the "missile gap" oratory that helped elect him. But if he means to deploy these weapons, he ought to field the serious questions they raise.

How would limited numbers of either the MX or the B-1 close the so-called "window of vulnerability" in this decade? The military advice to both the Carter and Reagan administrations has been that the nation needs 200 MXs shuttling around 4,600 shelters in Nevada and Utah. Moreover, that counsel reckoned with treaty limits on the number of accurate Soviet warheads. And it assumed the MX would survive a first strike only after half the system was completed, about 1988.

So what if the Russians refuse, in new SALT talks next year, to give up the big weapons that theoretically threaten existing Minuteman missiles in their silos? Without treaty limits on Soviet warheads, the safety of the MX would require not the already unacceptable 4,600 shelters in the Southwest, but 8,500 by 1990 and more than 12,000 by 1995.

As the authors of these estimates in the Congressional Office of Technology Assessment point out, the Russians can always acquire warheads faster than America can build landscape-scarring shelters. Even if the United States then scuttled the major accom-

plishment of arms control and managed to build an effective anti-missile missile system to defend the MX, it could not close the gap.

As for the B-1 bomber, what conceivable contribution can it make to the invulnerability of land missiles or the penetration of Soviet air defenses? It will be obsolete before it is deployed, according to former Defense Secretary Brown, and confined to threatening to lob Cruise missiles from a distance — a role the B-52 can play to the end of the century.

If a window of American vulnerability is about to open, none of the proposed weapons will close it. But is it even ajar yet? No rational Soviet leader can possibly believe that he could destroy most Minuteman in a single assault and avoid a devastating retaliation from sea-based and airborne forces — unless, that is, American panic persuades him that he could. All this anxiety about open windows can only frighten allies and make Russians reckless, without providing any new margin of safety.

The United States will not soon be vulnerable to a sneak attack if the Soviet Union expects to survive. A prudent president who also recognizes the threat of a strained economy would resist the rush, try negotiating SALT and take the risk that still exists to find missiles that could survive the still more accurate and perhaps more numerous weapons of the future. At the least, he would not avoid these obvious questions before he leaps.

THE NEW YORK TIMES

## In the International Edition

### Seventy-Five Years Ago

October 2, 1906

PARIS — Latest reports from the contestants in the balloon race for the International Coupe des Aeronauts indicate that victory lies between Mr. Frank P. Lahm, representing America, and Mr. C.S. Rolls, representing Great Britain. Definite news has been received from Mr. Lahm to the effect that he landed near Scarborough, England. When passing over Rye, near Hastings, Mr. Rolls dropped a telegram from the balloon into the village, directed to his wife in Paris. When the balloons sailed somewhat lazily out of Paris on Sunday evening, they appeared to be intent on bearing down upon Brest. The majority decided to terminate their operations on French soil.

### Fifty Years Ago

October 2, 1931

NEW YORK — Bathrooms larger than ordinary hotel rooms and 14 royal suites, or built-in palaces with vaulted roofs, and a kitchen 200 feet up in the air, these and other wonders were witnessed at the formal preview yesterday anticipating the public opening of the new 40-story Waldorf-Astoria, on the block bounded by 49th and 50th streets, Lexington and Park avenues. At a dinner given by Schulze and Weaver, the architects, the Waldorf was called the "child of the greatest conglomeration of geniuses the world has ever seen." Some 12,000 persons will attend the opening ceremonies of what is pronounced to be the world's most luxurious hotel. President Hoover will participate in the dedications.



## The Washington Numbers Game

By Meg Greenfield

**WASHINGTON** — It was the day before the president's speech on his revised economic program, and I was watching with three professionally engaged students of the current fiscal drama, people who have probably spent more time studying the Reagan budget figures than anyone but David Stockman. And yet, to my fascination, they could not be sure even of the numbers they were talking about.

"Is that \$15 billion the same as

the \$16 billion?" seemed to be the key question. One thought they should be added. "So we're talking about \$31 billion, then," I mused wisely, attempting to get into the game and also to demonstrate a certain dazzling technical proficiency. Maybe, but probably not, came the collective reply — no one knew. It didn't matter. Two days later we had a whole new set of numbers to argue over and misund-

erstand.

Numbers. It's the way we talk

now, at least about things that are

really dangerous or important. It's

also the way we mislead ourselves

and confound our purposes and

our values, all the while managing

to do so with an impressive air of

scientific authority and detachment.

### Approximations

Numbers, unlike words (the thinking goes), are truth. Words are mere approximations, opinions, ideas. The current dispute over the social and economic consequences of the president's program is far from being the only example. Consider the dispute over our military strength relative to that of the Russians.

I cheerfully acknowledge that

the numbers of weapons and the

size and strength of overall arsenals are critical elements in our re-

lationship, just as those chimer-

ical \$15 billion and/or \$16 billion

and/or \$31 billion budget savin-

gs-and-cuts are. Both have meaning

in real terms and also for the mes-

sage they are meant to send to

those far-flung communists and

money-lenders and other recalcitr-

ents an American and other

governments must try to influence

But there comes a certain point in

the arguments we have over

these things when the numbers

overreach themselves, put on air.

They demand to be regarded as

the whole story, rather than as useful

(sometimes) measurements of

where we are in relation to a real

goal.

You would think, for example,

that our fundamental argument

with the Soviet Union was over

nothing more than the arms fig-

ures everyone bandies about when

that subject is being debated, the

weird implication being that once

we get those stockpiles and charac-

teristics of the weapons in the right

relationship... well, the problems

will be resolved.

### Indicators

And you would think, too, lis-

tening to the same disputes, that

the numbers and sizes of various

weapons systems were, in them-

selves, sufficient indicators of the

strength of our defense, never

mind the condition or efficiency of

the rest of our military enterprise

or the wisdom of the strategy that

chose those weapons systems over

others in the first place.

The numbers, unadorned — out

there by themselves — are no more

reliable as a guide to social val-

ues. As in the strategic-and-econ-

omic-colonialism in Djibouti.

I believe that right now the

country is in the middle of a val-

uable and long-overdue reconsidera-

tion of our ideas of social justice,

economic equity and even national

possibility. What can we do? What

should we do? Reagan's choices

are forced choices on the rest of us.

But once again we are in dan-

ger of distorting the argument by

sinking into the numbers trap.

### Letters

#### 'French' Djibouti

I applaud the article, "French Influence Still Pervasive in Ex-Colony of Djibouti" (IHT, Sept. 15) in which your reporter stated clearly

the situation of the "classic neo-

colonialism" in Djibouti.

What is no doubt is that the French influence has penetrated deeply, even after independence, into every sector of life in Djibouti.

One sector that everyone feels

most is the education system. It is

no surprise to see university gradua-

tes unemployed in such a very un-

developed country. They were not

recruited merely because their

degrees and diplomas were not

from French universities or institu-

tions.

ROBERT DOUGLAS.

Djibouti.

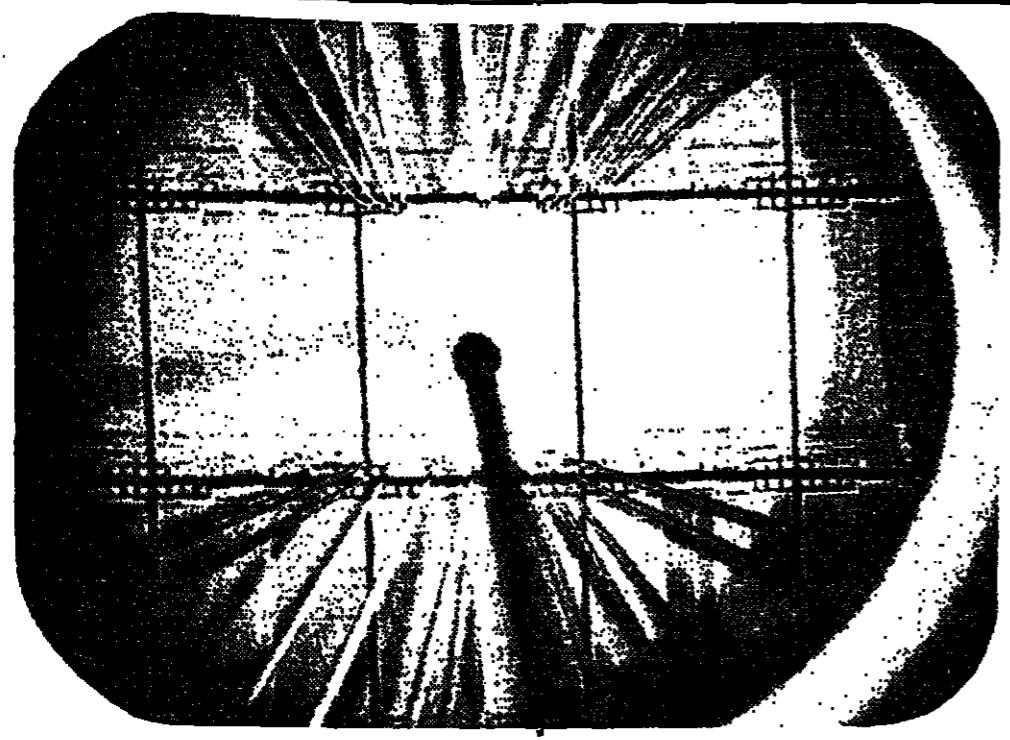
ROBERT DOUGLAS.

Djibouti.

Djibouti.

Djibouti.

Djibouti.



Above is a microprocessor, viewed through a microscope. At left, a technician uses tweezers-like instrument to pluck a silicon wafer from a tray and place it under a microscope for inspection. Special sanitary clothing is worn in "clean rooms" to prevent contamination.

## The Era of the Microprocessor

By John F. Kane

THE MICROPROCESSOR that ushered in a new era of electronics in the 1970s will have an even more profound impact during its second decade.

Developed in 1971 by a team of engineers from Intel Corp., the "computer on a chip" has spurred the creation of new multibillion-dollar businesses, has revitalized mature industries and plays an increasingly prominent role in the daily lives of millions.

Its impact is economic in the businesses it creates and stimulates, social in the influence it is having on the way in which millions live and work, and political in the struggle it has created among nations for parity in its new technology.

The microprocessor and other semiconductor products are helping to reverse a trend that has plagued the world's industrialized nations. They are resulting in products that are smaller, more reliable, use less energy and are less costly than their predecessors. They make workers more efficient by adding capabilities to or creating new products, and help reduce inflation because of the continuing lower cost of the microprocessors themselves.

The first microprocessor—the Intel 4004 introduced in 1971—contained the equivalent of 2,300 transistors and made possible the first pocket calculator. The microprocessor has come a long way since then. Motorola followed with the first low-voltage, 8-bit microprocessor—the 6800—in 1974, and National Semiconductor announced the first 16-bit single-chip microprocessor the

same year. Companies like Texas Instruments, Zilog, Fairchild and RCA have all made sizeable contributions to the development of successively more complex, more powerful microprocessors.

### The Newest

The newest microprocessor—the Intel APX 432—is a three-chip system containing the equivalent of 200,000 transistors with the computing power of a large IBM computer.

The tiny sliver of silicon that makes these things possible was the result of miniaturizing the functions of a computer to the size of an integrated circuit chip. Earlier, it had taken minicomputers seven years to exceed the number of mainframe computers in use. It took just three years for microprocessors to exceed the populations of both mainframes and minicomputers. In 1979 alone, 75-million microprocessors were shipped to customers.

By packing computer-like power onto a tiny chip, the microprocessor spawned a series of new businesses that emerged during the 1970s—industries that produce pocket calculators, digital watches, electronic games and the newest rage, personal computers.

Less visible—but equally sizeable—new markets were also developing in many mature industries because of microprocessors. Electronic instruments added computational power to their data-gathering functions and flourished. Life-saving medical equipment, such as pacemakers and

(Continued on Page 8S)

## TRADE FAIRS

### Cannes

Special to the IET

MORE than 7,000 videocommunications experts will meet in Cannes Oct. 9-13 for the 7th annual International Videocommunications Market, called by its organizers the largest and most comprehensive gathering of video, data, bank and telematics professionals in the world.

The market, which is being held under the auspices of the International Videocommunications Conference (VIDCOM), will bring together manufacturers and users of electronic communications and entertainment devices at the Palais des Festivals.

At the conference last year, 434 companies demonstrated equip-

ment and programs. This year, VIDCOM officials say, representatives from more than 75 countries, including the United States, Canada and Japan, are expected to attend. In the home video category alone, more than 400 participants are anticipated, with increases in other exhibition and discussion categories as well.

According to VIDCOM, exhibitors and panelists will include representatives from Sony, Philips, Siemens, RCA, Warner Communications, the Walt Disney companies, the major North American and European television networks and production companies, and scores of individual and institutional video programming and equipment manufacturing companies.

VIDCOM's organizers will provide a battery of attorneys to assist and advise conference participants on how to do business in an international market of conflicting legislation. The attorneys also will offer counsel on combating the growing problem of illegal video sales.

VIDCOM's piracy discussions will focus on the liabilities of legitimate users and distributors and the measures that can be taken to stem illegal reproduction and marketing of video materials.

Another symposium will be devoted to videotek technology and sales. Videodisks, which pick up signals from a rotating platter rather than the tape of a cassette, have met with consumer uncertainty. Among the exhibitors in this category will be RCA Selectavision, which earlier this year launched a \$150-million videotek promotion campaign in the United States.

Also exhibited were scientific literature, equipment for radio amateurs and stamp collections concerning communications.

During the fair, scientific conferences discussed technological research, physics and mathematics theory, and future applications, among other things.

The Soviet Union, which had one of the largest stands at the exhibition, focused on its satellite technology with Ecar and Horizo satellites and ground television receivers.

For the Western participants, the fair was mainly a showcase for highly sophisticated technology geared toward the vast market in Eastern Europe. The main products exhibited were automatic telephone exchanges, television equipment, communications transmission equipment and microprocessors.

### MOSCOW

By C.G. Cupic

A COMMUNICATIONS technology fair held in Moscow during the first half of September, "Sviaz-81," drew more than 250 specialized companies from Western industrialized nations—including the United States, Britain, France, West Germany, Japan, Italy and Sweden—and 25 industrial groups from the Comecon countries and Yugoslavia.

Sponsored by the Ministry of Communications and the Chamber of Commerce and Industry, and designed to attract ordinary visitors along with communications technology specialists, this was the third such international exhibit since 1975.

The exhibition had a dozen categories covering highly sophisticated items like telecommunications transmission by satellite, with its operating and controlling equipment; radio communications, involving transmission over hertzian waves and testing and controlling instruments; television equipment, with recording, editing, transmitting and receiving material; telephone systems with private automatic branch exchanges, subsets, answering machines and voice data terminals; materials and technology for the production of such equipment as microprocessors, semiconductors, integrated circuits, optical fiber, photo-electronic and cable material; equipment for mail sorting and distributing, teletypers, telephone radio relays and more.

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## Satellites Fuel a Revolution in World Business

The biggest disturbance caused by the "birds" concerns TV, and the next few years could see an explosion in channels serving Europe

By Isabel Bass

LONDON—Suspended 22,300 miles above the equator are about 50 electronic birds with Star Wars sounding names like Intelsat V, SBS 1, Molniya, Anik-B, and OTS. Some are long with aerodynamically flat solar panel wings while others are stubby cylinders bristling with antennas.

They have changed world communications since the first was launched 24 years ago and have challenged the national control of telecommunications. They have powers that are transforming society.

Across the Western world, the business community is already soaring with the latest in electronic stylus systems, teleconferencing facilities, viewdata desk-top interactive terminals offering instant two-way satellite communication of documents and data including voice and pictures transmissions.

### World Usage

In France, the PTT (the national postal and telecommunications system) runs a network of 60 sound-centers and four video-conference centers for business people who prefer not to travel. A one-hour videoconference costs 1,200 francs.

In the United States, the world's first private satellite service exclusively for business, Satellite Service System, has been established. It has its own satellite and provides corporations such as Boeing with a rapid computer data traffic system, IBM with voice conferencing, and All-State Insurance Company with teleconferencing.

In Britain, Viasat, the world's largest television news agency, has just set up an international satellite service for broadcasters and business communications. The new enterprise, Viasat Broadcast Services, organized jointly with the Robert Wold Company of Los Angeles, expects to link up the European and Far East components of one of Wold's U.S. clients.

Britain's 10-year-old state-owned Confravision, which offers two- or three-way linkups from eight studios in the country, is so nervous about the commercial competition that it refused to release figures on consumer usage.

The biggest disturbance caused by the birds concerns television, and the next few years could produce an explosion in the channels serving Europe's 250-million viewers and bring TV to developing countries. Already more than a billion viewers watch programs transmitted by satellite.

### The first European satellite

### Singapore: A Showcase For Projects

SINGAPORE—The prospects for continuing foreign investment here largely depend on the increasing capabilities of Singapore's international communications facilities.

Appropriately, government authorities have formulated particularly demanding requirements for future systems and services. Their detailed tenders are considered extremely innovative by competing international manufacturers who feel that Singapore is an important showcase for advanced telecommunications products.

Singapore's specifications for its integrated telecommunications network are so sophisticated that

(Continued on Page 12S)

### Paris

By Harriet Welty Rochefort

PARIS—Someday in the very near future in and out boxes may disappear from the bosses' desk—but not from his office.

They'll be on a screen on a work station that he uses and he will do all his paperwork simply by indicating what he wants done by means of a little pointer called a "mouse." He can also do page layouts and even create their own graphics on the word processing machine.

An international panel of lawyers will address the legal problems encountered by distributors of recorded materials in international markets where copyright clearances and royalty regulations differ from country to country.

VIDCOM's organizers will provide a battery of attorneys to assist and advise conference participants on how to do business in an international market of conflicting legislation. The attorneys also will offer counsel on combating the growing problem of illegal video sales.

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### Catching On

Launched in the U.S. in April, 1981, the STAR system, in spite of a costly price tag (approximately \$16,500 for one 8010 Executive Work Station), is catching on.

The commercial launching of the STAR system will begin next month with plans for installation of the machines in mid-1982. Says a Rank Xerox spokesman in Paris: "The Xerox 8010 was designed for professionals and managers, not clerical staff because professionals cost more than their staff and we saw a need for increasing productivity and saving money on that side. It has been well-received in France and is a human concept, easy and clear to use."

The fact that office tools such as files, drawers, incoming and outgoing mail and messages can be dealt with directly on the screen and that the machines can be spread over several floors in the same

about their effect on national sovereignty of the air waves.

On Nov. 25-27, a 2½-day international conference will be held in Vienna, addressed by 13 European Satellite specialists drawn from space agencies to advertising industries, co-sponsored by the Economist magazine of Britain and the International Institute of Communications, an organization of 1,000 communications professionals.

"This is the first year when we're sufficiently advanced to discuss the practicalities offered by satellites. We're bringing together, for the first time, all the people involved in different industries who need to know what's happening.

The stress is on new programs and new financing for new audiences," said John Hawkins, director of the conference.

Pointing out that the nature of European satellite services likely to be very different from current national-oriented proposals, he outlined some of the problems to be discussed at the conference.

"Space is a resource and people are only just realizing how you can use it," said Mr. Hawkins, who won over 13 European PTTs and sidestepped existing British government regulations in order to set up this first European advertising-service satellite.

"We'll talk about what new services are likely to be operating by

1985 and who will own, control, operate, and supply them with programs. Will standard public service principles or rating dominate European broadcasting? And who will watch?" he said.

The speaker likely to attract the most attention is Brian Haynes, former British TV producer and current director of Satellite Television Ltd.

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Isabel Bass is an American journalist based in London.

## INTERNATIONAL Herald Tribune

Published with The New York Times and The Washington Post

PARIS, OCTOBER, 1981

## COMMUNICATIONS TECHNOLOGY

A SPECIAL SUPPLEMENT

### High Tech Supremacy: A Global Struggle

#### JAPAN VS. UNITED STATES

#### EUROPE IS TRAILING

By Joel Stratte-McClure

EUROPEAN companies are attempting to rival their Japanese and American counterparts in numerous sectors of the telecommunications and information disciplines.

While Europe is in the important areas of microelectronics technology, European industry has managed to establish a foothold in some areas, including digital switching, and transmission, teletext, videotex and other new product fields.

But rigid national programs and a splintered continental market prevent Europe as an entity from establishing the necessary technical and commercial clout that would result from the advent of a Pan-European scale.

### Spectacular Growth

The growth of the Japanese semiconductor industry has been spectacular. In 1976 the total value of its integrated circuit production was \$7 million. In 1970 it had reached \$132 million; in 1980 it was well over \$2 billion.

Semiconductors represent a significant "growth-linked" industry, representing vital components in the products of a large number of other industries that are substantially electronics-based. These include computers and data processing, telecommunications, transportation, consumer electronics, industrial processes, instrumentation and strategic military systems.

The development of these industries will, in turn, transform modern society and determine which

(Continued on Page 12S)

### SUCCESS STORY

An Wang, the founder of Wang Laboratories, Inc., has turned his philosophy ("find a need and fill it with the best solution") into a success story. See article on Page 11S.

(Continued on Page 12S)

### Personal Computers Altering Daily Living



Home computers monitor stocks, beat you in chess, and...

Schools, colleges and universities have been evaluating the machines for the past two years and are beginning to place major orders for hundreds of machines, according to Apple Computer.

Not surprisingly, the main use of personal computers in schools is to teach "computer literacy"—giving students direct experience in using computers. Another important area of study is programming, in which students learn computer languages such as Basic, Pascal (developed in Switzerland by Nicolas Wirth) and Cobol and then create their own programs.

Still in the future is the much-heralded home market. This amounts to potentially the largest group of customers in terms of dollars and units.

But to crack that market the industry must develop a personal computer selling for \$300 or less. And that computer must be able to perform in both word- and number-related areas. The \$300-per-person computer exists today, but it is still a simple machine performing single, specific tasks.

The present price range reaches up to \$8,000 for an Apple 111 system offering color graphics, sound, and extra memory. These more expensive systems can be expanded to include more memory capacity and printing capability to provide performance comparable to that of minicomputers costing up to three times as much.

The most popular models are programmed in the English-like basic language, which enables even nontechnical users to work

(Continued on Page 10S)

puter Inc., of Cupertino, Calif. Founded in 1976 by Steven Jobs, then 21, and Stephen Wozniak, then

## COMMUNICATIONS TECHNOLOGY

### Voice-Recognizing Machines Taking Off After a Decade of Trial

By John Javetski

THE NEXT time you hit the wrong key on your calculator, wait impatiently as your microwave oven counts down to zero or pound the steering wheel of your stalled car, watch your language; that machine may be listening.

Now emerging from the laboratories of equipment manufacturers around the world are a host of products equipped to understand and respond to human words instead of to keyboards and switches. Thanks to an endless stream of cheaper, more powerful computer components from the electronics wizards of Silicon Valley, California, and Japan, voice-recognizing machines have improved productivity on the job and convenience at home at affordable prices and with near-perfect accuracy.

Primitive voice-recognizing machines reached market about 10 years ago and now number almost 1,000 in the United States alone. They only understand vocabularies of less than 100 words that must be spoken clearly and separately by one person, who first trains the system to his voice by saying each word several times. Despite those severe limitations, those so-called isolated-word machines can simplify certain tasks.

#### Industrial Environments

One such system, hooked up to an automatic telephone dialer, calls any of 40 business associates when an executive says his name into the phone. Another eliminates the need for an extra telephone operator at a brokerage house by answering investors' calls for stock quoted in a voice that is itself electronically synthesized.

The majority of today's installed isolated-word machines are used in industrial environments where

workers' hands or eyes or both are busy. Air traffic controllers, for example, can improve their concentration with a voice-recognition system installed between their microphone and computer display. To call up more information about Flight 158, for instance, they can just say "one, five, eight" instead of looking away from the screen to type in the digits.

At an intermediate level between today's isolated-word machines and future products that will understand continuous speech are connected-speech recognition systems. Now in industrial and commercial use are machines that can understand short groups of words or numbers, like a five-digit ZIP code. One connected-word system, priced at \$30,000, understands sentences of five words from a 120-word vocabulary, as long as the sentence is not more than two and a half seconds long.

Even the limitation of speaker dependence can be avoided with

#### Microprocessor Era

(Continued from Page 7S)

patient-monitoring systems, were now possible. Industries as diverse as communications and manufacturing, space exploration and toy making are all benefiting from use of microprocessors.

It is in the area of telecommunications that European nations hope to finally catch up with the U.S. and Japan. Led by Sweden's L.M. Ericsson and France's CIT-Alcatel, Western European countries are current leaders in developing a new generation of digital telephone systems that represent a \$1-billion market.

It is the strategy of European governments and businesses alike that the microprocessors and other special semiconductors used in these new systems will be engineered and manufactured in Europe.

Unlike the great technological revolutions of the past, the fruits of the microprocessor era will touch every human being well within a single generation.

Financial experts see the microprocessor market by the year 2000 perhaps as great as \$100 billion annually — enough for two or three new microprocessors per year for every human being on the planet.

John F. Kane is vice president, editorial services, of Regis McKenna, Inc.

#### Three-Part Process

How does an electronic device understand human speech? All voice-recognition machines do three things. First, they analyze the spoken word for energy content across the frequency range of human hearing. Next, the analysis

is converted to the digital zero, one, and two language of ones and zeros and stored in an integrated-circuit memory chip. Finally, a microprocessor compares the digital pattern of the input word to the previously stored patterns of all vocabulary words, as pronounced by the speaker; the best match identifies the input.

Electronics technology continues to raise the accuracy and lower the cost of the circuits that perform these tasks. For example, the filters that do the energy analysis now cost 1,000 times less than they did a decade ago. The chip that converts that analysis to digital form literally costs less each day.

A typical memory chip that can store 500 four-letter words now costs about \$5; it cost 10 times that much only a year or two ago. Even the powerful little microprocessor, invented in 1971, goes for only \$15.

With tremendous profits in the offing — some researchers are predicting a billion-dollar market for voice-recognition hardware by 1990 — companies are racing to

get to market first with a practical, inexpensive product.

The players in the voice-recognition game fall into three categories. First, there are the companies that make the integrated circuits — firms like Intel, Texas Instruments, Motorola and several aggressive Japanese companies.

Next in line are the companies that buy integrated circuits and connect them, typically on a page-size board, so they can recognize speech. These companies are the real voice-recognition experts, but their futuristic names — Auralic, Threshold Technology, Heuristics, Verber, Voicetek — are unlikely to become household words.

Last in the chain are the manufacturers of products familiar to everyone — typewriters, large computers, word processors, copying machines and so on. Members of this club include International Business Machines, Xerox, Apple Computer, Westinghouse and others.

John Javetski is former editor of *McGraw-Hill's Power & Electronics Magazine*.

#### A History of the Working Population in the U.S.

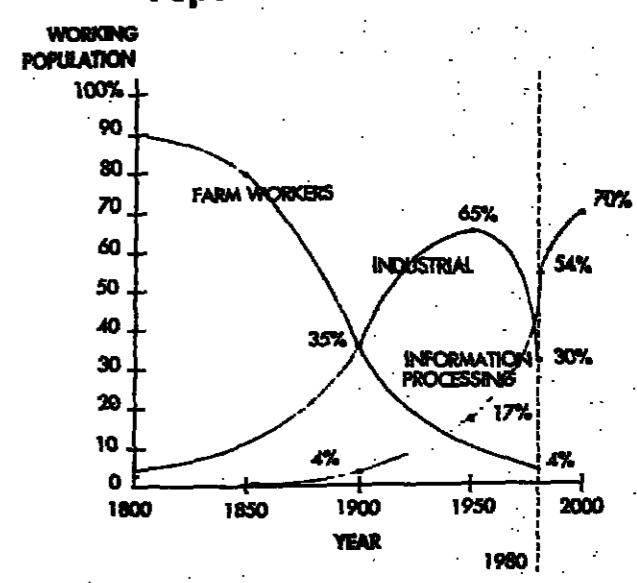


Chart provided by Apple Computer

### Adapting the Handyman Concept to Software Services

A FEW months ago, a small French company that sells printing machines had the problem of how to quickly select different types of information ranging from the firms that had purchased machines, the names of firms interested in different kinds of equipment to a list of the machines used by its competitors.

Shuffling through numerous lists each time a mailing arrived was becoming a waste of time.

The answer to their problem came from a new software services company, TDT (traitement de

textes, French for word processing), which offers its customers advice on how best to use the word-processing machines they have and a selection of qualified personnel to step in and solve software problems. In the case of the printing machines company, TDT put the company's address file on memory, enabling them to find the exact information they needed within seconds.

TDT, which moved into its offices into the center of Paris last February, is the brainchild of two young veterans of the computer age — Terry Downing, a 27-year-old Englishman and Grenville Lee, a 35-year-old New Zealander. Mr. Lee, who started working on computers with Shell in New Zealand in the 60s, came to Europe on a holiday and ended up working for CINCOM, a large software company in Brussels, and later for Clark Equipment in Paris.

Lee met Downing at the Aubervilliers squash courts, "back in the days when we had time to play," said Mr. Downing, the company's technical director for word processing, who came to France after business management and computer studies in England as well as word processing work with several major companies there.

Is the fact that the two company heads are English-speaking (al-

though both speak French) a handicap in France? "On the contrary," said TDT consultant Bruce Golding, who also serves as the company's translator, making complicated technical terms intelligible to laymen. "This is a field where the Anglophone is recognized as having knowledge. English is very often the common language in the computer field."

TDT's services are two-fold — hiring out personnel to work on computers and preparing computer programs in their offices and offering the means by which companies can use their word processing machines to the best advantage. The company has perfected a program to convert the IBM 3740 diskette onto a word processor. "We are the only people who can convert the diskettes for our customers," said Mr. Downing.

Another field TDT has taken interest in is the development of additions to word processing such as WordAdd, a system that enables the storage of a text, typed on any ordinary golfball typewriter, to be converted onto a word processing machine or direct telex link.

"When you have a text or a letter typed on an electric typewriter, you've lost it once the letter is dispatched. The advantage of this system is in being able to keep the text stored on diskettes for re-

use," said Mr. Downing.

Turnover has been increasing at a rate of 50 percent per month and clients include international banking corporations and leading multinationals as well as the Armed Forces. The company seems to be filling a needed gap in the area of software services.

"To our knowledge," says Mr. Golding, "there's no one in the market who knows that word processors can do three-quarters of the work of computers."

— H.W. ROCHEFORT



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apple computer

Telematique — this multi-product programme being developed in France is the most advanced and cohesive project of its kind today.

A brief summary of the individual services now being implemented includes:

Teletel Videotex, Electronic Directory System, Smart Card Technology, Telewriting, Antipe Teletext, Low Cost Terminals, Mass Facsimile, Audiographics, Teleconferencing.

With a carefully coordinated R&D programme ensuring technical compatibility and common standards, this family of products maximises the key users benefits of: Low Cost and Ease of Use. This technology and know-how is now available internationally through INTELMATIQUE—the promotional arm of the French Telecommunications Administration.

INTELMATIQUE

THE ORGANIZATION FOR THE INTERNATIONAL PROMOTION OF TELEMARKETING

THE FRENCH PAVILION  
AT MUNICIPAL OCTOBER  
IN LONDON, G.B. OR  
CONTACT

July 1982

## COMMUNICATIONS TECHNOLOGY

### Cable Television Comes Into Its Own in U.S.

By David V. Jackson

CABLE television, for many years the deprived stepchild of the entertainment industry, is coming into its own in the United States.

Created in the late 1940s, cable TV by 1970 claimed only about 9 percent of the 60 million U.S. television households as customers. Ten years later, cable TV had penetrated just 22.9 percent of about 77 million TV households.

But the decade of the 1980s promises a quantum jump in the growth of cable TV. By the end of 1982, according to industry projections, 30 percent of all U.S. TV households will be "cabled" with an increase to 40 percent anticipated by 1985.

Behind these statistics lies an industry that is multifaceted and rapidly evolving.

During the dawn of the TV age in the United States — the years just after World War II — people who lived far from the few TV stations then in operation got very poor reception or no reception at all. The first cable TV systems were established in such remote areas. Their operators found the most favorable sites in those areas, put up powerful antennae and connected them via cable to their subscribers for a fee.

All of the programs received by the early subscribers to cable TV were "free," in the sense that there was no charge for the programming, only for the reception from public broadcast TV stations.

In the 1950s, various entrepreneurs sought to take advantage of cable TV's vast potential by developing additional programming for which subscribers would pay a fee. This was the birth of "pay TV," but it got off to an inauspicious start.

The TV networks that provided "free" programming and the stations that broadcast this programming were aghast at the threat they perceived in pay TV, and they mounted an intense lobbying effort against it.

In 1966, the Federal Communications Commission came down hard on the cable TV industry. The FCC prohibited cable systems from bringing the signals of distant TV stations into the 100 largest U.S. television markets. At the same time, the agency barred cable TV systems from bringing into a city any program that duplicated a show being broadcast by a TV station in that city. Two years later, the FCC went even further by prohibiting the establishment of any more cable TV stations in any of the 100 major TV markets.

It was not until 1977 that the FCC moved to deregulate the cable TV industry, on the grounds

that the TV networks no longer needed much protection.

Despite the bonds that restrained it from growing rapidly in the early and mid-1970s, cable TV was becoming a structured industry. Actually, what the public generally refers to as cable TV might more appropriately be called the home entertainment industry. It includes filmed entertainment, which provides the programming; the cable TV system operators who transmit the programming to the home; and the equipment manufactured by the third segment of the industry includes transmission and decoding devices, videotape recorders and videodisk equipment.

Surprising though it may be, there is still no cable service available in parts of many major U.S. cities, and some cities have no cable TV at all. But these voids are gradually being filled. Last month, a franchise was awarded to Cablevision Systems to wire the entire city of Boston at an estimated cost of \$93 million. Despite this high initial expense, Cablevision expects to be making \$23 million a year from the Boston franchise within 10 years.

It is generally believed that by the end of this decade virtually every resident of the 100 major markets will be able to subscribe to a cable TV service. The reason this objective will not be achieved overnight is that it can take several years to build a franchise after the drawn-out process of selecting a franchisee has been completed.

It is important to note that there are several "tiers" of cable TV service. The first tier is simply the reception of TV signals via the cable. Additional tiers consist of various levels of programming — i.e., a sports channel, a movie channel,

an all-news channel. To get the additional tiers, subscribers pay an additional fee.

The tier concept has been successful. Initially, only about 25 percent of cable TV subscribers took the additional tiers of service. With the introduction of new services, this penetration has risen to about 75 percent — that is, 75 out of every 100 cable TV subscribers buy the additional programming.

Some subscribers have taken more than one pay service despite the fact that there is frequently a duplication of the movies shown.

Another distinction that should be pointed out is that there are three types of cable and pay TV. One type transmits its programming over a cable. Another sends its signals over the air in scrambled form from a UHF television station; to unscramble the signal, a TV set must be equipped with a decoder. The third type transmits a scrambled signal direct from an orbiting satellite to viewers' homes.

Technological advances of cable systems will also enhance the attractiveness of cable TV. Recent prospective franchisees are promising interactive dual cable systems with 100 or more channels of capacity and a dozen or more channels. There is only enough spectrum at present to utilize about 50 of those channels, but there are increasing numbers of programmers who are developing new product.

Cable companies are also developing more of their own programming. Tiersing is allowing cable companies to target more specific audiences. Movies are packaged into those for general viewing, children, mature audiences, ethnic groups and various languages. Decoders are becoming more difficult to tamper with and most are now addressable.

#### PARIS TRADE FAIR

(Continued from Page 75)

SICOB Boutique, featuring all the innovations in this field, is hardly surprising. Ranging in price from 1000 francs (approximately \$200) to \$15,000, these personal computers can be used for everything from educational to just "fun" games to the teaching of drawing or music theory, and are also being used by certain liberal professions for their accounts.

Other data processing events during the Trade Fair included the Convention Informatique (Data Processing Conference) and Study and Application Days, the former for users and software companies, and the latter a meeting place for professionals.

David V. Jackson is a senior financial analyst for Bateman Eichler, Hill Richards Inc., a Los Angeles-based securities firm. This article was adapted from a report presented by Mr. Jackson at recent seminars for institutional investors in London, New York and Los Angeles.

Harriet Welty Rochefort is an American free-lance journalist based in Paris.

"Engineering excellence? High productivity? Good industrial relations? You can depend on Northern Ireland."

Sir Kenneth Corfield, Chairman and Chief Executive, Standard Telephones and Cables, London.



Sir Kenneth Corfield Senior Officer ITT United Kingdom is Chairman and Chief Executive of its subsidiary Standard Telephones and Cables (STC), which employs 2,000 in electronics and telecommunications in Northern Ireland.

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"Whether one manages an engineering operation locally or as part of a very large multinational organisation, Northern Ireland can be depended upon for several essential ingredients of a successful business including engineering excellence, high productivity and good industrial relations. I speak from personal experience — based upon doing both!"

His message is clear, for small companies as well as large.

The business environment in Northern Ireland is technologically orientated. Its people work hard and their productivity is high. Its infrastructure is well developed. It has a reliable telecommunications system.

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	Eastern	Central	Mountain	Pacific
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3PM	9AM	9AM	9AM	9AM
4PM	10AM	10AM	10AM	10AM
5PM	11AM	11AM	11AM	11AM
6PM	12PM	12PM	12PM	12PM
7PM	1PM	1PM	1PM	1PM
8PM	2PM	2PM	2PM	2PM
9PM	3PM	3PM	3PM	3PM
10PM	4PM	4PM	4PM	4PM
11PM	5PM	5PM	5PM	5PM

Based on 6 hours time difference. Time difference  
may be more or less, depending on country and season.)

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than any other way. And it lets you negotiate to make the best deal possible.

Just use the schedule on the left to be sure that you call when Americans are in their offices.

Now, are you ready for the countdown? 3...2...1...dial. Your toy space ships are on their way.

In recent years, a number of public tenders for digital telephone switching systems have been issued. The Ericsson AXE system has been a top contender in almost every one.

# AXE: the facts and the future.

In the digital telephone switching market, choosing a system may still seem a difficult problem. So many systems exist, so many of them are still in an early development stage — with little more than large promises to back them.

There is one system, however, which is rapidly becoming a world switching favourite — AXE, from Ericsson. A system so powerful, elegant and flexible that it has changed the perspective of most manufacturers and telephone administrations in the world. Today it is obvious that basic AXE features like functional modularity, software security and handling-cost minimisation are being recognised as fundamental requirements on modern switching systems.

#### Unparalleled success

In the short time since it was introduced, AXE has met with a success unparalleled in the history of telephony.

More than three hundred exchanges with a total of more than three million lines have been contracted for 27 countries. In 18 of these countries, AXE exchanges are already actually in service.

Local production is established in six countries, and under way in a further seven — another measure of the successful development of AXE into a fully operational, manageable system, with comprehensive documentation and extensive support.

#### Towards the future

Such astounding success does not mean that the development of AXE is over and done with. On the contrary — it brings with it an obligation to protect the investments of our customers.

This protection is accomplished by a continuous development plan and a steady flow of added features and functions. The unique functional modularity of AXE means there is no end or limit to this process.

In fact, the uniquely effective AXE system structure allows for future advances in both component and system technologies.

A powerful digital group switch, for example, was incorporated in AXE almost from the beginning. Now, recent advances in component technology allow us to offer digital subscriber stages as well, completing the first major step in the long-term development plan of AXE.

#### Why not choose the best?

AXE is clearly ahead today, and its continuous enrichment makes it very difficult for any other system ever to match its advantages. In five years' time there will be just one better digital switching system than today's AXE — AXE with five years' enrichment.

The conclusion is clear: when there's a choice, choose the best.

## The Ericsson Group



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Partners in telecommunications progress worldwide.

## COMMUNICATIONS TECHNOLOGY

### Personal Computers Are Altering Daily Life Around the World

(Continued from Page 75)  
with the machines in understandable terms. Instructions for the user appear on the television screen in English or logical contractions of English.

The versatility of the computers is provided by its software programs — the instructions that tell the computer what to do. For example, a computer can be pro-

grammed to perform word-related tasks such as letter writing, text editing, and list maintenance. By simply changing programs, the same machine becomes expert in performing such number-related jobs as financial analysis, planning, forecasting, and long and difficult calculations.

The last decade's advances in semiconductor technology have made personal computers feasible and affordable. However, it is easy-to-use software that has made these computers useful and popular and now contributes significantly to the growth of the personal computer market.

Creating software for personal computers has led to the birth of an entirely new industry — software publishing. Software publishers sell programs on magnetic disks and cassette tapes that contain the instructions that tell computers what to do and how.

The software publishers behave

much like traditional book publishers. They do not usually write programs — they edit promising programs written by others. The "editors" are a staff of professional programmers who evaluate and improve work submitted to them by program authors.

Stepping Up Power

Because of the growing demand for more sophisticated applications, some software companies are stepping up from simple Basic to adapt more powerful computer program languages to personal computers. SofTech, Inc., of San Diego, Calif., is marketing Pascal, a language widely used in education, for use on personal computers. Micro Focus Ltd. of London has converted Cobol, a powerful business language, to the small machines. Both of these languages were available until recently only on much larger and more costly machines.

— JOHN F. KANE

### Too many people take telex service for granted.

For telex service to the U.S.A. that can't be beat...it's RCA Globecom.

Telex across the oceans has been in existence since RCA first pioneered the service overseas. Today, telex service to the U.S.A. is offered by the telex administration of your country in conjunction with various American communications carriers... and many customers think all telex service and carriers are the same. Well, they're not.

The fact is—there are differences. One carrier in the U.S.A. and only one—is the leader in the industry: RCA Globecom.

We serve more people in more places than any other U.S. overseas telex carrier, and we also offer quicker telex connections, with access to more destinations.

We offer a fully automatic computerized telex system with features that increase speed, accuracy and capacity—24 hours a day, seven days a week.

Whether your needs are vast, complex or relatively simple, RCA Globecom is in a unique position to help you get more in telex communications.

To enjoy the benefits of RCA telex service to the U.S.A. be sure your telex calls are sent via RCA—with RCA

prefix codes and RCA telex numbers. This information is available to you in our free directory offered below.

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For your free copy, fill in the coupon and mail to: Marcus Cudina, Manager Overseas Marketing, RCA Global Communications, Inc., 60 Broad Street, New York, N.Y. U.S.A. 10004

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Company name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ Country \_\_\_\_\_

**RCA Global Communications**

**LONDON** — Enthusiasm ran high at London's first video and tape conference at the National Film Theater last spring. Industry figures from 22 countries gathered amid an atmosphere of pandemonium and chaos. But it was clear that they were onto a winner. A boom has reached video.

Market figures had been soaring wildly. The Japanese company, IVC, is said to have increased profits by 80 percent in the boom. Video, said another source, is the fastest-growing consumer electronics market in Europe.

This month, video fever descends on Cannes, with over 6,000 people arriving for Vidcom, the exhibition that is to video what the

Cannes Film Festival is to film. Although video is but one in the cluster of new technologies now offered, it has rocketed to gild-edged status. Conference circuits are filled with rags-to-riches stories of strong-nerved prospectors who have accumulated untold profits overnight.

**Success Story**

One story concerns Roy Featherstone, an MCA Records executive, who last summer was sent out with a minuscule backup staff to cover part of Britain's fast-moving software market. After nine months, it picked up 27 percent of the market from major and minor rivals and is anticipating Europe and world markets next. "We just set up in Germany and we think Scandinavia will take off at an annual 30 percent for the next three or four years. The market has escalated beyond anyone's expectations," said Mr. Featherstone, now president of the newly-formed CIC Video International.

Like Mr. Featherstone, most European businessmen have set their sights on the pre-recorded or software industry. For others, the lucrative infant hardware game is already over, won by the Japanese on a roughly \$1.2-billion investment.

To everyone's surprise, Britain has been the most eager to accept video. It has the fastest take-up rate of any country and the fastest take-off of any British consumer electronic boom. Forecasts indicate that 1.35-million units will be in British homes by Christmas as compared with 275,000 in 1980 and 107,000 in 1979. It has bypassed refrigerators, freezers and music centers in the league table here for electronic consumer goods. It's now overtaking radios in sales.

**Production**

Japan produces well over 90 percent of the world's recorders to the dismay of Philips, the European electronic company that launched the first consumer model in 1972. It was an amazing lead and one that industry observers believe Philips and partner Grundig can not regain. The combined total of their European factories can provide no more than 10 percent of 1982's expected production capacity.

The world's demand for video has even surprised the Japanese, who have been doubling their output each year to meet the high export demand. This year's production reaches 8.4-million units, compared with 4.4 million in 1980 and 2.2 million in 1979. For both Mar-

shita and Sony, who lead less than a dozen Japanese companies producing the goods, video recorders have become the largest single sales unit. In the first half of last year, they brought Matsushita 18.4 percent of its sales revenue and accounted for 26.6 percent for Sony.

This year, most of the industry's production is ending up in the export market, with 17.8 percent going to Asia, 30 percent to the United States, and 42.1 percent to Europe. Japan's domestic market is huge and the combined U.S.-Japanese market remains the industry's largest. But the sales expansion is in Europe.

To remain competitive, Japan has started to negotiate with European manufacturers.

**Joint Venture**

JVC's recent joint venture with Thordi-EMI, Thomson-Brandt and Telefunken radically changes the European production scene. Until now, Vienna and West Germany were the only places where video recorders were manufactured, thanks to the efforts of Philips and Grundig, soon to be followed by Britain and France.

Although the exploding pre-recorded industry may yield the biggest bonanza in Britain where artistic and technical talent is abundant, the advisory business is also booming. Media consultants, staffed by a mix of former government ministers, out-of-work film directors, advertising whiz-kids and electronic wizards are sprouting up to offer business advice on anything from 1/4-inch tape to industrial relations by means of video.

Then there are the estimated 5,000 video pirates in London who flood the market with illegitimate recorded tapes of feature films and porn. "Britain is the world center of the video piracy industry," says Brian Morris, London-based lawyer of the Motion Picture Export Association of America. He points out that nearly every West End film is available on a pirated video within three weeks of its opening.

— ISABEL BASS

### In Europe, the Video Boom Is On

companies that make corporate and other audiovisual products, though nearly 400 in Britain recently. Other young companies hire out hardware or sell technical services such as computer editing.

**New Businesses**

With 1981 software turnover estimated at about £50 million, it's not surprising that, almost daily, another publishing or film company, newspaper, broadcasting empire, small production house or well-known media personality is opening a business and announcing new pre-recorded titles.

Thorn-EMI, for example, with its £35-million Video Program division that opened last March, is marketing movies and TV shows. BBC Video, starting in July, already offers some 20 tapes on subjects ranging from gardening to the Edinburgh Tattoo and home baking. A small production company, Catalyst, puts out a magazine compilation on an otherwise blank cassette, providing what it calls "watch and wipe" video programs.

Although the exploding pre-recorded industry may yield the biggest bonanza in Britain where artistic and technical talent is abundant, the advisory business is also booming. Media consultants, staffed by a mix of former government ministers, out-of-work film directors, advertising whiz-kids and electronic wizards are sprouting up to offer business advice on anything from 1/4-inch tape to industrial relations by means of video.

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— ISABEL BASS

### Arabsat Searching for a Launcher

By Robert Bailey

After several years of inaction, an order was finally placed, in May, by the Arab Space Communications Organization (Arabsat) for three medium-sized three-axis stabilized satellites.

The \$130-million contract that has gone to Aerospatiale of France, in association with Ford Aerospace and Communications Organization, is significant less for its value in monetary terms than for its political and social implications of that all-too-rare commodity in the Middle East referred to as cooperation.

The scheme has been discussed since the early 1970s. In April, 1976, an agreement was signed by the communications ministers of the Arab League states to establish a regional satellite system.

Originally, the target was to put an Arab satellite into orbit by early last year.

Contractual wrangles that eventually led to a demand for a re-tender, as much as political prevarication, has led to delays.

The end of 1983, or early 1984,

now seems the most optimistic target date for the project to get off the ground.

While the communications hardware is under construction, a launcher has yet to be selected.

Options are held on both the Arab League states and the European Space Agency Ariane rocket and the U.S. National Aeronautics and Space Agency shuttle craft.

Airbus plans to have two satellites in orbit and the third at a

spare on the ground. Those in orbit will provide 8,000 telephone

circuits and six television channels.

There will also be a pan-Arab channel and a community channel which can be received by low-cost ground stations," said the Arabsat director-general, Ali al-Mashar.

Exactly how the project will evolve remains to be seen. Arabsat headquarters is in Riyadh, Saudi Arabia. The latter country, predictably, has the largest shareholding (26.6 percent) with the other shares having most of the other shares.

**Further Improvement**

Further substantial telecommunications improvement on a regional basis will occur as the result of collaborative plans to be undertaken through the International Telecommunications Union and

the Arab States Broadcasting Union. A master plan to set up a telecommunications network for the Middle East and Mediterranean basin was approved by 28 sponsoring governments in September, 1978. They included the 21 Arab League members: Algeria, Bahrain, Djibouti, Egypt (now suspended), Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, the U.A.E. and North and South Yemen.

The other signatories to the plan include six non-Arab Mediterranean countries: Bulgaria, Cyprus, Greece, Malta, Turkey and Yugoslavia, and one non-Arab African country, Ethiopia.

The plan focuses on creating and improving land, satellite and submarine cable links among the 28 countries involved. It covers 28 telecommunications services and calls for an additional 30-million telephone lines and 300,000 telex lines by 1990 as well as radio and television broadcasting to be increased.

The ITU estimates that spending on the purely international part of the network that accounts for only 10 percent of the total investment required, will amount to nearly \$3 billion up to 1990.

Egypt, Iraq, Kuwait, Lebanon, Oman, Saudi Arabia and the U.A.E. have agreed to cover 35 percent to 40 percent of the master plan, with the UN Development Program contributing an additional 30 to 50 percent. The rest of the cost, as expected, will be carried by the non-Arab Mediterranean states.

Implementation of the master plan began in 1979. So far, work on the latest phase of the project has consisted largely of feasibility studies, with an emphasis on strengthening communications in the Red Sea area. In 1980, ITU teams carried out surveys for Red Sea crossings from Suez in Egypt to Dubai in Saudi Arabia by both microwave link-up between Aswan in Egypt and Hafza in the Sudan.

Implementation then shifted elsewhere.

Experts from the ITU have helped plan the extension of the Saudi microwave network to San'a in North Yemen and prepare surveys on links between

Saudi Arabia and the United Arab Emirates.

While distances involved and the scope of improvements places Saudi Arabia in a special category, probably the most dramatic telecommunications developments have taken place in Gulf states like Bahrain. There, all the modern conveniences of the industrial world are available including a mobile automatic telephone system and wide-band international circuits.

The exciting possibilities arising from modern technology make it certain that no country wishing to develop can avoid what is undoubtedly expensive investment in telecommunications.

Robert Bailey is a British journalist specializing in Middle Eastern affairs and is an editor at the Middle East Economic Digest.

### Taking the Tests to the Consumer

SOME 2,000 volunteers are currently trying out a videotex system in their homes that could change the future for them — and for the rest of France.

Instead of spending hours on the phone or running all over Paris to find information on what concerts are playing, where to go on a package tour, or even just to read the newspaper, the volunteers are saving their precious time by sitting at home and consulting service pages on the videotex machine hooked up to their home phones.

Called Teletel 3V because of the three areas it serves (Velizy, Versailles, and the Val de Bièvre), the experiment began in 1978 when the French General Direction of Telecommunications gave the green light for go-ahead work on technical specifications, prospecting of companies wishing to participate in the experiment, and user studies.

On June 15 of this year, the phones of 2,000 of the volunteers selected (the total being 2,500) where hooked up either to Standalone video terminals with a black and white screen manufactured by Matra and Thomson for those users not having a TV, or a basic terminal for those users using their own TV set, manufactured by Philips (Radiotécnica TRT).

Ninety-five percent of the users are hooked up to the local data bank center in Velizy and their communications go directly through the phone line. The remaining five percent of the calls are transferred by Transpac from the data bank in Velizy to distant private centers. In this system the user can have a dialogue with the person on the other end, whether it be his bank, the SNCF,

or a department store. "Very rapidly," said a spokesman at the Velizy Teletel Center, "such as transferring money from one bank account to another or actually paying for an order at a mail order house with a magnetic telepayment card can be carried out."

For the moment approximately 100 companies and 40 government agencies ranging from the Club Med to Japan Air Lines are participating in the experiment. Volunteers, who make up a representative sample of the population, can consult programs varying between 12 and 100 pages, depending on the size of the company. A daily newspaper called JEF (Journal Electronique Français) is put out daily by six journalists from the "Comité Technique Interministériel de la Recherche pour la Presse." The paper covers everything from politics in France and abroad to cultural events and a daily horoscope and race track results.

One other feature of the videotex system is the electronic mail bag that allows one user to send a message to another subscriber as well as consult messages he may have received.

During the experiment, users are paying 50 cents for each phone call and another 50 cents for every five minutes they use the line. In an effort to encourage government agencies and private firms to participate in the experiment, the French Telecom is allowing them to use the data bank in Velizy until the end of the project.

The commercial launching of the system "depends entirely on the results of the experiment," according to a PTT spokesman who added that in any case teletel will first be installed in government agencies and private firms and only later in private homes.

— HARRIET WELTY ROCHEPORT

Devic 50

## COMMUNICATIONS TECHNOLOGY

## Coordinating Word, Data, Audio and Visual

By Craig Justice

**B**RUSSELS — In 1945, a brash 25-year-old Chinese student journeyed to America for graduate work at Harvard University. After the Communists emerged victorious from the civil war in his native land, he decided not to return. It was to be China's loss, for within a couple of years he had developed magnetic core memory, the device used for storing computer data.

International Business Machines bought the patent for \$500,000. The young inventor took the money and in 1950 founded a research laboratory, giving it his name: Wang.

Twenty-one years later, the Massachusetts-based Wang Laboratories Inc., which employs 15,000 people worldwide, has become a tough competitor for IBM (as well as Xerox and International Telephone and Telegraph) in the field of small computers and office automation, thanks to the foresight of "the doctor" — as An Wang is called.

"The philosophy of Dr. Wang is to find a need and fill it with the best solution," said Fernand Marchand, manager of Wang's new International Telecommunications research Center (ITRC) in Brussels. For Wang Inc., the "need" was identified as the completely automated office, and the "solution" called for the manufacturing of word processors and small computers, which it began in 1972. Since then, Wang's growth has been phenomenal.

During the last five years, the company has grown at an annual

rate ranging from 40 percent to 60 percent, and revenue this fiscal year will exceed \$1 billion for the first time.

Wang is the leading producer of screen-based word-processing systems — combination typewriter and television-screen devices used for composing and writing manuscripts or letters.

In the data-processing market, Wang is in second place behind IBM in small business computers, priced at \$25,000 or less.

Wang is among the leaders in developing and implementing the latest telecommunications technology. Among the most innovative of these developments, announced earlier this year, is "Wangnet," an integrated information system that will coordinate the technologies of word, data, visual and audio processing within and between offices.

## First Stage

The first stage in the implementation of Wangnet will be "local networking," which will allow Wang equipment to work with other Wang equipment in the same building through connection to a single coaxial cable — containing at least three bands — capable of transmitting 64 kilobits a second. This will be made available for purchase within the next year.

Secondly, Wang will introduce "remote networking," allowing Wang machines to work with other Wang machines in different locations. The final step will be to implement "Gateway," permitting Wang equipment to communicate

with non-Wang equipment in-house and beyond.

When the Wangnet becomes fully functional, it will provide capabilities such as video-conferences and "mailway," whereby a letter can be transmitted at speeds approaching that of light.

A major task for Wang is to implement the technology it has already developed. The telecommunications center in Brussels, opened on May 1, will serve this purpose. The ITRC evolved out of a smaller operation in Belgium with five people. Wang decided to upgrade this operation by investing \$1 million in the creation of a new center on the 12th floor of the Leopold Tower, using the former group of engineers as a nucleus. There are currently 15 researchers who work in three product lines: Virtual Storage computers (VS), Office Information Systems (OIS) and the 2200 computer group. There is also a group concerned with quality control. Plans call for expanding to a team of 30 within the next year, and once the center becomes fully operational its annual budget will be approximately \$1 million.

## Software

The software work involves creating what Mr. Marchand called "rather sophisticated" protocols — such as the X25 — to ensure that data is transmitted without error, and to devise protocols whereby different computers in Europe can be linked and "speak" the same language. The ITRC will also be developing protocols to permit the

transmission of data over the new, high-speed Teletex network and Packet-Switching networks.

According to Jim Cox, director of international products, Wang is placing special emphasis on its European market, which accounts for 25 percent to 30 percent of sales. One of the company's major research efforts, Mr. Cox said, is in the Teletex system, which Wang hopes will replace the slower Telex system.

## Obstacles

There are obstacles to introducing Teletex in the United States, he said, because the telephone network there is a good system, whereas "in Europe the costs are prohibitively expensive, or connections slow in coming." Although the unit costs of Teletex are higher than Telex or a dial-line, Mr. Cox predicted that there "will be a major change in European [post and telecommunications] tariffs, encouraging or forcing companies into Teletex. We are seeing it in Germany now, and will see it in the future in other European countries." He said that he foresaw similar developments in Australia, Canada and Japan.

Wang machines are capable of transmitting text in almost every language, including French, Chinese and Arabic. As for total machine translation, Mr. Cox said, "We haven't gotten as far as that — but we're working on it."

Long-term forecasting in telecommunications is nearly impossible. Dirk Angoorer, who



Jim Cox

manages the company's branch in Brussels, said: "Everything is changing so fast that it is almost impossible to look five years ahead — even two years is difficult." Nevertheless, Wang has developed a Digital Voice Exchange (DVE) system, which will allow a user to telephone someone and "speak" to that person even if he is not there by using recordings. The system could also be programmed to telephone several people and give them the same message, at the push of a button. Mr. Marchand said, "It's so new, you can't sell it. People say, 'I have my secretary for that — why do I need this?' But two years from now, when we're able to market this, they'll want more."

Craig Justice is an American journalist based in Europe.

## Asians Look at European Industry

**P**ARIS — "You could ride a bicycle through it" was the amused comment of Indonesian Doddy Herdiana as he toured the vast underground complex of the Tuilleries Telephone Exchange in the heart of Paris.

Mr. Herdiana, of Indonesian State Telecommunications, was one of a group of 10 Asians who met with representatives from the French Post and Telecommunications as well as private manufacturers of telecommunications equipment during the first week of September. The group, composed of two representatives each from Malaysia, Indonesia, Thailand, the Philippines and Singapore, is finishing a 10-month International Telecommunications Union project on the standardization of signaling systems in telecommunications networks in the Association of Southeast Asian Nations region that has taken participants to Sweden, Belgium, West Germany and Japan.

Swedish ITU project coordinator Lennart Soderberg said: "France was not our highest priority on the list of countries to visit, but the idea was to go to those countries having equipment."

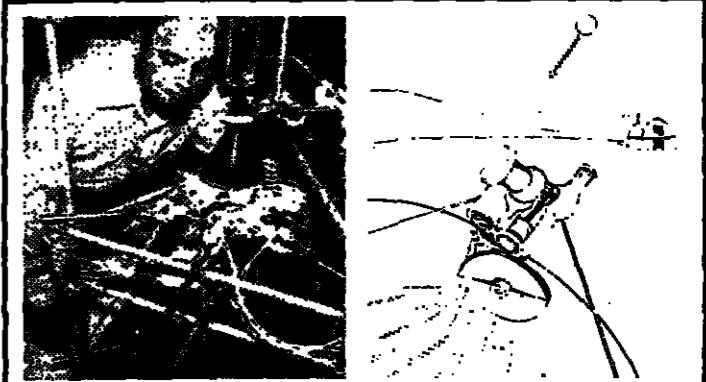
Problems in the ASEAN countries vary, depending on the setup of the telecommunications industry, the economic level of the country and the specific problems in supplying equipment. Our reason for planning to standardize signaling is that local systems are not acceptable within countries. So we want compatibility within the countries for exchanging information on the signaling side," said Renato C. Gendrano of Philippines Long-Distance Telecommunications. "In the Philippines, one problem we have is that the equipment is imported, before from the U.S. and now from Germany. This means constraints in meeting the demand from suppliers."

Will the Asians buy French? Most preferred not to reply, agreeing with Mr. Soderberg that "we are here just to collect ideas. Our conclusions will be made in relation to the technology available, and the manufacturers chosen may depend on the choice of the governments involved."

"The information we received in France will certainly help us to better consider the best solution to the problem of standardization of signaling," said Visudi Pongpapong of the Telephone Organization of Thailand.

The fact-finding mission was organized by the Agency for Technical, Industrial and Economic Cooperation, a French organization that promotes industrial exchanges.

—H.W. ROCHEFORT



**SOLAR ENGINE** — Physicist Arlon Hunt of the University of California's Lawrence Berkeley Laboratory tests the solar-absorbing power of smoke. Acting as a "black gas," carbon particles can instantly absorb sunlight, heat up and expand the surrounding air and drive an engine, such as the one in the sketch at right. The two-cycle piston engine, shown here in rural use, will employ a single-chip microprocessor to track the sun and adjust engine speed.

# Philips Telecommunications specialise in project realisation, network design, public telecommunications networks, analogue and digital telephone exchanges, coaxial line and optical fibre transmission systems, satellite earth stations, HF, VHF, UHF and microwave radio, mobile radio, telex-via-radio, intelligent telex and telephone terminals, word processors, facsimile, viewdata, teletext, data input/output terminals, PABX's, integrated business communication networks, private communication networks, customer staff training, after sales service (and sometimes very, very long headlines).

Integrated communications technology

Philips Telecommunications, P.O. Box 32, 1200 JD HILVERSUM, the Netherlands.

## COMMUNICATIONS TECHNOLOGY

## Singapore: Showcase for Telecommunications Projects

(Continued from Page 7S)  
 many manufacturers can't meet them," said a senior executive at Munich-based Siemens, an active bidder for Singapore contracts. Georges Krebs, an engineer with France Telecom, which promotes French products in Southeast Asia, said, "Singapore is demanding the most advanced techniques and testing the latest services to the degree that it's become a veritable research and development laboratory."

The government is continuing to modernize its telecommunications network and has earmarked a capital expenditure of Sing \$2.7 billion during the next five years. The funds will be used to introduce services that include tele-conferences, televiwan (an interactive system for disseminating and retrieving computer-based information using the existing public switching network for communication and the home television set for display), electronic mail and a multi-access travel reservation system providing travel agents with direct access to reservation computers of numerous air-lines.

In the recently published annual report of the Telecommunications Authority of Singapore

(Telecoms), Chairman Frank Y.C. Yung said that Singapore had set the goal "of bringing about a total telecommunications network on a professional and residential level," said Sung Sio Ma, director of corporate planning for Telecoms. "To be a competitive international business center, we require a full range of electronic services as quickly as possible."

Singapore's thrust toward the instant information age is one that, according to Sung Sio Ma, will optimize existing resources to obtain low service costs available to all subscribers.

Telecoms began its modernization efforts in the mid-1970s when it began actively improving the basic telephone service. It established a reputation as a pioneer in the field in early 1977 when it installed a 4.2-kilometer fiber optic link, and in 1979 the authority formulated a long-term strategy to meet future requirements.

Today Singapore, a country of 2.4 million people, has 719,817 telephones — supplying 30 percent of the population, against 11.6 percent in 1974. Gross revenue for international telex and telephone sets with an option for an additional 200,000 units. Tenders are being drawn up for telexes, telex and fiber optic equipment. Next year,

"All of these developments lead to the marriage of computer and telecommunications on a professional and residential level," said Sung Sio Ma, director of corporate planning for Telecoms. "To be a competitive international business center, we require a full range of electronic services as quickly as possible."

Telecoms will merge with the postal service to facilitate the introduction of electronic mail.

"Our requirements often involve modifications of off-the-shelf equipment offered by the manufacturers," Sung Sio Ma said, citing geographical constraints that make Singapore an atypical market.

"We are an interesting client because we experiment with new systems and are flexible and small enough to quickly implement

services which fit our specific needs."

Telecoms prides itself on being an open market for telecommunications suppliers, but Japanese firms have traditionally obtained a major share of the business. The authority's current policy is to work with different foreign industry leaders and jointly develop systems, products and services. Although Telecoms has a reputation for demanding the latest equipment at very low prices, the government contends that this attitude is changing.

"Because our demands are now so technically advanced, we realize we must share development costs with our future partners," said Pek Hock Thiam, director of the telecommunications division at the Ministry of Communications. "We are willing to help pay to develop

— JOEL STRATIE-MCCLURE

## Europe Trailing in Competition

(Continued from Page 7S)

technology required to make Europe competitive: create data banks competitive in world market establish a multipurpose data network linking industries and capitals in member countries and coordinate the work of organizations concerned with telecommunications.

But despite these efforts Europe is entrenched in a tradition that puts numerous roadblocks in the way of common sense. The government-controlled Posts, Telephone and Telegraph Administrations (PTTs) are both a blessing and a bane. PTTs provide determined and quickly implemented national programs, nationwide product specifications and standards, protection for domestic manufacturers and the much-needed infusion of capital for large projects. But this type of protectionism, lack of competition and guaranteed markets suffice the establishment of a competitive pan-European industry.

European executives readily voice approval for a restructuring of the European industry that would create a competitive atmosphere and lead to shared

research and development costs, streamlined production facilities and joint commercial ventures. But what they say and hope is distant from present and foreseeable reality. A sampling of opinion:

"To be strong internationally we must move away from national markets and have more competition within Europe," says Klaus Luft, vice chairman of the German data processing company.

Gerrit Jelof, a member of the Philips board of management in the Netherlands, contends that "nationalistic tendencies restrict technological advances and the market size to the detriment of everyone involved."

The list of persons in favor of strengthening pan-European industries also involves Americans and government officials in different countries.

"The Europeans originally created these national barriers to protect themselves," says Cyril Yansouri, general manager of Hewlett-Packard's European facilities. "But captive markets have failed to encourage exports." Jonathan Solomon

at the Department of Industry in London, which is overseeing the gradual deregulation of the British telecommunications industry, says that "British companies had an easy time under the umbrella of a government monopoly and were not competitive enough on export markets."

Despite these criticisms and suggestions, most attempts to create a European "approach" or open European markets have been frustrating and frustrated. EEC initiatives did lead to the creation of a pan-European data communications network, Euro-net, and there is a substantial collaborative effort in the area of satellite communications under the auspices of the European Space Agency — though many countries are now opting for a national or bilateral rather than European approach.

An attempt to create a European computer company (Uaidata) between French, Dutch and German interests failed as did an effort to develop a Franco-English digital switching exchange. Consequently, the outlook is still rather gloomy.

— JOHN F. KANE

## World Battle for High Tech Leadership

(Continued from Page 7S)  
 nations assume leadership roles in the next century.

Japan's strategy has been to use

its domestic market power as a springboard into the international marketplace. This is abetted by the Japanese system of *keiretsu*, which is a formal conglomerate industrial grouping of companies arranged around a single large bank or industrial firm. Japan's six largest semiconductor companies, which control about 80 percent of the domestic market, are members of *keiretsu*.

The *keiretsu* structure results in three important advantages for Japanese electronics firms. It gives them an important internal market for products, it generally includes an international trading company which performs overseas sales, distribution and financing, and it provides easy access to low cost capital for continued expansion.

Unlike the U.S. where semiconductors are the main business of most major suppliers, semiconductors represent a relatively small portion of the income generated by Japanese chip makers. The result is that these companies have ready-made, internal markets for much of their production.

NEC, which at 17.8 percent has the largest percentage of semiconductor sales, also is Japan's leading communications equipment producer. Fujitsu is Japan's largest computer maker. Hitachi is the country's largest diversified electronics systems producer. Toshiba is a conglomerate producing heavy electrical equipment, instrumentation and appliances. Mitsubishi is the largest manufacturer of small business computers. Matsushita is the country's largest consumer electronics and home appliance maker. All six are multibillion companies, with 1979 sales ranging from Fujitsu's \$1.8 billion to Hitachi's \$10.7 billion.

## Semiconductor Sales

By contrast, most U.S. semiconductor manufacturers rely on semiconductor products for the vast majority of their sales. Mostok, AMD, Fairchild, National and Intel all derive more than 50 percent of their sales from semiconductor devices.

Japan, a highly industrialized nation with more than 110 million people crammed into a small land area, is the world's second largest market for semiconductor devices. The dominance of the major semiconductor companies enable them to exert strong influence over the direction of growth of the market. By altering the domestic composition of their products and demand, these firms can also control the share and composition of imports entering their domestic market.

Thus, domestic market power translates into an ability to affect the pattern of international trade in semiconductors and semiconductor-based products. Japan, Inc., has the chip-making capacity, the organization, and the marketing to be a major challenger in the struggle for international supremacy in high technology products.

— JOHN F. KANE

## Pan-European Television: Stakes and Skepticism High

*Special to the IHT*

London — The British telecommunications world is in a state of flux. Britain's current television system, consisting of two BBC channels and one commercial network, has been drastically changed. A new channel has been authorized by the government to start broadcasting next year and early morning broadcasting, the commercial service under David Frost and former U.K. Ambassador Peter Jay will start in 1983 with an additional BBC service.

Pan TV was recently adopted after a decade of campaigning by companies here, for a two-year test under strict control of the Home Office. Subscribers, in selected communities with existing cable networks, have been offered an extra channel for about £3 a month. Although unable to do much here, Britain's pioneer cable operators regard themselves as among Europe's first.

Satellite television personnel, who won government approval last May but no cash, recently set up the first commercial English language satellite station. This fall they hope to beam some programs into European homes and try for a part of the estimated £2-billion advertising revenue expected to be generated by a pan-European TV market.

Such enthusiasm meets with

skepticism from various observers, who note that the British paternalistic broadcasting approach is too deeply entrenched to permit satellite programs from eventually coming under the control of established broadcasting organizations. That means that private finance would end up supporting the huge capital costs of satellite set-up operations and receive only rental revenue.

These recent happenings involve the entire telecommunications industry and are being scrutinized by more than one European country. The British Telecommunications Act, effective Oct. 1, breaks up the state-owned telephone monopoly on equipment and services here.

## Mercury Network

Already under way is an independent commercial inter-city office-to-office telecommunications network, optical fibers being laid on the tracks of British Rail, the nationalized industry. The Mercury network, as it has been aptly named, was formed by Barclay's Merchant Bank, British Petroleum and Cable and Wireless, and has the government's approval.

The hope here is that services like Mercury can lure continental PTTs into linkups. That means cross border trade for private sectors here. It would help Europe compete with the United States and Japan in office-of-the-future technology and services.



July 1982

## Archaeology

### Agriculture May Have Started in Egypt

By Frederick M. Wendorf

*United Press International*

NEW YORK — Evidence is mounting that the birth of agriculture took place in Africa 8,000 years before plants were domesticated in Mesopotamia, which has long been regarded as the cradle of civilization, according to recent archaeological studies in Egypt.

Fred Wendorf, professor of prehistory at Southern Methodist University in Dallas, said a large number of grains and spikelets of barley were recovered from two arid sites at Wadi Kubbaniya along the Nile near Aswan in southern Egypt on an expedition early this year.

The grain was preserved because it was charred, possibly in cooking. Wendorf said. The radiocarbon dates for the sites range from 17,000 to 18,000 years ago, placing them in the Late Paleolithic period.

#### Grains, Animals

The Wadi Kubbaniya sites and four others nearby are far outside the known range of wild barley and wheat, and it is doubtful that such cereals could have grown in the difficult habitat of the Nile wadi.

#### Lifestyles

### Their Home Is Their Castle

By Kenneth Jautz

*The Associated Press*

VIENNA — For nearly a thousand Viennese, home is truly people's castle.

They live in Schönbrunn castle, a 285-year-old former summer residence of the Hapsburgs, with more than 1,200 rooms surrounded by sculptured gardens.

The 200 apartments that once sheltered court favorites or imperial soldiers now house families of federal employees.

"It's a good arrangement from all sides," said Wolfgang Walther, the youthful overseer of the private apartments. "It makes upkeep easier and at the same time gives people a pleasant place to live."

The apartments are scattered about the main building and two wings, a building complex with 67,000 square meters (almost 17 acres) of floor space. Most are hidden in nooks and crannies no tourist ever sees.

Many are smallish two-room affairs of less than 90 square meters (about 100 square yards). Some have ceilings as low as 6 feet; others boast stately rooms about 14 feet high, with parquet floors. Best of all, rents are about half the average price in Vienna.

"It's not the savings that keeps people here," said Margarete Pawlik, a third-generation resident.

without seasonal planting, which would indicate "human intervention," Wendorf said.

There has been widespread agreement among scientists for the past 30 years that the process of controlled food production began in southwest Asia after the end of the last glacial age about 9,000 years ago, with wheat and barley as the first domesticated grains. Domestication of animals is generally ascribed to the same area at about the same time.

"We still don't know if the barley found at Wadi Kubbaniya is wild or domestic, but we have found the floors of the shelters of these Kubbaniya people and charred grains coming from them," Wendorf said. "We have found harvesting equipment and grinding stones, so they apparently made flour. They had no pottery, but they may have had wooden containers to hold the flour."

He said grain probably was grown in the slopes and bottoms of wadi basins after the recession of the annual Nile flood and harvested in the later winter or early spring. In addition to barley, the six sites have rendered up charred wheat grains, lentils, chickpeas and date seeds — evidence of a broad

spectrum of humanly nurtured plants," Wendorf said.

"What we are finding here is how the interaction of man and plants began and that it began much earlier than we thought, in Africa — not Asia."

Scientists have always thought that population pressure or changes in environment led to domestication of plants and animals but we find no evidence of this at Wadi Kubbaniya. It has also been thought that new sources of energy such as cereals transform life into a more advanced society, but the Wadi Kubbaniya people went on hunting and fishing and living in small groups.

"None of our previous theories fit here, so there still is a lot to learn."

#### Pre-Dynastic Egypt

Wendorf pointed out that the rise of pre-dynastic culture in Egypt, characterized by the manufacture of pottery, did not occur until 12,000 years after the domestication experiments of the Wadi Kubbaniyans, a *Homo sapiens* people, similar to Cro-Magnon man, whose skeletal remains were first found in 1967. The sites of Wadi Kubbaniya may represent repeated or overlapping occupation over a period of 5,000 years.

Wendorf was one of the members of an expedition that dug at Wadi Kubbaniya from January through March under the joint sponsorship of Southern Methodist, the Polish Academy of Science and the Geological Survey of Egypt. He said he expects to return to the site for the same winter period for the next few years.

Other Late Paleolithic sites discovered in Egypt that contained stone artifacts indicating the harvesting of grain are at Wadi Tushka, near Abu Simbel and now under water; and Kom Ombo and Esna north of Aswan, where sickle-like stone pieces with lustrous edges, indicating use in harvesting grain, were found. Wendorf reported on earlier excavations at the sites in the current issue of Archaeology magazine.

#### Hotels

### Waldorf-Astoria Turns 50

*United Press International*

NEW YORK — The Waldorf-Astoria Hotel celebrated its 50th anniversary as the United States' most famous hotel Wednesday with a colossal birthday party featuring a "tallest birthday cake ever."

A representative of the Guinness Book of World Records was there to check out the Waldorf's claim for its 21-foot 5-tiered cake with gold and white icing crowned by a revolving miniature Waldorf in sugar crystals.

"Usually an apartment here is free only when someone dies," Walther said. Some apartments are passed from one generation to the next.

"We're like a small town here," said one resident. "There's a community feeling that is usually hard to find in a city."

Guinness has listed a 32-foot cake baked in London last May as the "tallest wedding cake," but the Waldorf's confection was definitely in the running for a new category of birthday cake records, the cake-checker said.

Jean MacArthur, widow of Gen. Douglas MacArthur, kept the first slice.

Former President Gerald Ford and Mrs. Ford checked into the hotel a few hours before the party but failed to make a promised appearance.

For the dancing is only one element, and quite a limited one, in a mixture of mime and gymnastic movement, giant puppets and dummies, with various theatrical devices and some vocal contributions. All these go to make such a refracted view of Cocteau that the "Poppy" lets this be seen.

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**IBM to Restructure Entire Operation in U.S.**

From Agency Dispatches  
ARMONK, N.Y. — Computer International Business Machines announced a corporate restructuring Thursday that analysts said was aimed at streamlining its marketing operations and preventing a loss of customers to its more nimble competitors.

IBM said that all U.S. marketing and service divisions will report now to a single group management and that its development and manufacturing divisions have been restructured into two groups.

John R. Opel, IBM president and chief executive, said the new marketing group organization is the first step toward the company's objective of offering its entire product line through individual marketing units.

IBM said it will combine in early 1982 the resources of its data processing, office products and general systems divisions in two new divisions and each will market its full product line to a specific set of customers.

**3 New Groups**

Mr. Opel said the new marketing structure will simplify the distribution of IBM's products.

He said this would enable the company to take greater advantage

of rapid changes in technology and to coordinate long-range plans "to provide more effective growth paths for customers."

IBM said the three new groups formed Thursday are information systems, information systems and technology, and information systems and communications.

The information systems group will be responsible for U.S. marketing and service operations and includes data processing, federal systems, general systems, information records, office products, customer service and field engineering divisions.

The change means a scrapping of IBM's traditional division-based sales approach, in which separate sales representatives from the data processing, general systems and office products units might all call on the same customer. Instead, IBM customers will be able to order a full range of IBM products, ranging from its large mainframe computers, to small desktop business computers from the same sales personnel.

"The customer has been demanding solutions to business problems that cut across IBM's divisional lines," said Howard Anderson, president of the Yankee Group, a computer and commun-

ications industry research concern.

"IBM will now organize around those customer needs, not its own divisions."

Within the company, the change is expected to benefit personnel within the huge data processing division. The division produces the large, complex computers, known as mainframes, that are the cornerstone of IBM's business.

Because the large computers and their software are more difficult to master than those in the microcomputer and small business and home computer field, IBM's data processing people are expected to adjust to the reorganization most easily. Mr. Anderson said. Last year, the data processing division contributed 91 percent of the company's pretax income.

Fighting Sales Reps

IBM is saying that its data processing clients no longer will be restricted to buying data processing products," he added. "Before sales reps from its different divisions were fighting with each other to get into the same client. Meanwhile, IBM was losing sales to companies like Digital Equipment and Data General."

In response to questions about a possible restructuring, a spokes-

man at IBM headquarters said on Wednesday, "it would be to take advantage of growth opportunities in the future, the very same reason we've made such large capital investments over the past several years. It would not be to reduce staff."

Last week, Xerox announced in response to widespread speculation, that it would dismiss employees, as well as trim jobs through attrition, voluntary layoffs and inducements for early retirement. Analysts speculated that IBM, and perhaps Eastman Kodak, might soon follow suit.

Partly as a result, IBM offices were vibrating Wednesday with gossip about layoffs, forced retirements and embellished severance options. A sales official, who asked not to be identified, said the unusual call for branch sales managers to meet with high company officials in various Westchester County offices had sent speculation rippling through the company.

"As you might imagine, there is not much work getting done," he said. "The latest rumor is that we're selling the general systems division to Mobil. Does that set the scene for you?"

Mr. Anderson said the blurring



All amounts in millions except per share net

	1980	1979
Revenue.....	\$24,713	\$22,863
Profits (net) ....	3,562	3,011
Per Share.....	3.44	3.44
Total Assets (of Dec. 31) ....	26,703	24,530

Divisions contributing to 1980 revenue

Office processing.....	82%
Office products.....	15%
Other.....	2%

**British Banks Increase Base Rates To 16% to Aid Beleaguered Pound**

By Allan Barker

Reuters

LONDON — British banks lifted their base lending rates to 16 percent from 14 percent Thursday, the second sharp increase in two weeks encouraged by the authorities to tighten monetary policy and help the pound.

The decision, led by Barclays

Bank, to raise the base rates from which all other lending rates in the economy are scaled, was in response to upward pressure on rates in the London money markets and high interest rates in other countries.

It ends any remaining doubt that the government of Prime Minister Margaret Thatcher intends to concentrate on the defeat of inflation, even if this means a further delay in industry's recovery from recession and adds to the nervousness on the London Stock Exchange.

A rise in bank base rates to 14 percent on Sept. 16 was one of the factors that undermined confidence in London shares and led to a severe decline in share values that stopped only on Tuesday.

Share prices were marked down sharply immediately after Thursday's day's increase but later recovered in light trading and the Financial Times index lost only 2.1 points to close at 473.3 after losing 5.8 Wednesday. Bond markets saw very little activity, dealers said.

The rise in interest rates benefited the pound, which had been firmer over the last few days in anticipation of such a move to attract more money into Britain.

It jumped to \$1.833 from \$1.80 Wednesday and was stronger against the Deutsche mark, closing later at 4.2575 DM from 4.2212 DM Wednesday.

The steady decline of the pound from the high levels of late last year accelerated last month, and authorities were concerned because this increased the cost of raw material imports, thus endangering the government's anti-inflation targets.

With the government's monetarist policy of holding down public spending under fierce attack as unemployment stands at almost 11 percent of the work force, Mrs. Thatcher urgently needs to appear to be controlling inflation, analysts said.

The government reduced interest rates from 14 to 12 percent last March in response to pleas from hard-pressed industry, but since then its hopes of lower U.S. interest rates have been dashed, while

countries such as France and Switzerland have pushed up their rates.

This made the pound vulnerable.

"It was the authorities' stated intention that interest rates should be determined by market forces," Barclays General Manager John Quinton said. "This has now happened. We can no longer delay raising our base rates." He said that he hoped the increase would be temporary.

Last month the central bank gave an unambiguous signal that it wanted higher rates by sharply raising the interest rate on money that it lends to the market.

This week lending rates on overnight and one-week money rose sharply to above 16 percent in response to conditions in the market and 15 percent dollar rates in the United States.

This opened a large gap between

**U.S. Factory Orders, Building Outlays Off**

Reuters

WASHINGTON — New orders received by U.S. manufacturers and construction spending both fell in August after posting gains in July, the Commerce Department said Thursday.

New orders dropped \$3.19 billion, or 1.9 percent, to a seasonally adjusted \$169.16 billion in August. The decline follows a revised gain of 0.3 percent July.

Originally the department said construction spending fell 1.5 percent in July. Despite the decline in August, spending was 6 percent higher than a year earlier.

Construction spending, as measured in inflation-adjusted dollars, fell 1.6 percent in August to a seasonally adjusted \$153.1 billion.

During July, inflation-adjusted spending edged down 0.1 percent.

Construction spending in August was 1.7 percent higher than a year earlier after adjustment for inflation.

Spending on private construction fell 0.8 percent in August to a seasonally adjusted annual rate of \$181.9 billion after rising 0.9 percent in July, the department said.

Public construction spending fell 4.5 percent in August to a seasonally adjusted annual rate of \$49.1 billion. During July public construction spending fell 1.5 percent.

Gold Futures Record Set

Reuters

NEW YORK — Commodity Exchange said Thursday that monthly trading volume in gold futures set a new record in September at \$1,063,449 contracts traded, up from the previous mark of 1,024,681 contracts set in December, 1980.

**Wall Street Prices Slightly Higher**

From Agency Dispatches

NEW YORK — Prices on the New York Stock Exchange closed slightly higher Thursday after moving in a narrow range all day as the market treaded water for a second day following the sharp run-up early in the week.

The Dow Jones industrial average drifted lower most of the day but started gaining in afternoon trading to close up 2.28 at 852.6. Advances led declines by an 8.6 margin and volume gained slightly to 41.7 million shares from the 40.7 million traded Wednesday.

Analysts said investors are taking a "wait and see" attitude toward the market until they are sure the recent gains will hold.

The Dow average rose from a low of 801 Monday morning, and analysts said it is typical for the market to go through a process of "backing and filling" after such a broad swing.

There was general agreement that President Reagan's press conference had little effect on the market.

McGraw-Hill economist Wil-

liam E. Gibson said Thursday that despite the high cost of borrowing money, U.S. plant and equipment spending should climb 16 percent next year to \$371 billion from \$321 billion this year.

Mr. Gibson said the gains will come from several factors, including a considerably stronger economic environment than this year, important tax incentives for investment and savings, and a gentler regulatory treatment of investment projects.

In corporate news, Ford Motor Co. said orders for its 1982-model cars are running 21 percent ahead of 1981-model orders a year ago, while 1982 truck orders are up 27 percent.

Natomas said Thursday that an exploratory well in Matagorda County, Texas, tested gas at a calculated rate of 7.4 million cubic feet daily and has an open flow potential of 19.4 million cubic feet daily.

Grumman rose 3 on heavy turnover to 36%. It is fighting off a takeover bid by LTV, which added 1/2 to 15 1/4.

McGraw-Hill economist Wil-

**U.S. Agency Acts to Limit Size of Commodity Holdings**

From Agency Dispatches

WASHINGTON — The U.S. Commodity Futures Trading Commission, worried by the boom and bust in the silver market last year, has adopted a new rule to prevent speculators from gaining control of commodity markets.

The CFTC on Wednesday unanimously adopted a regulation requiring exchanges to extend speculative position limits to a range of actively traded commodity contracts that previously had not been restricted.

The rule will mean restrictions on the number of contracts speculators can hold. Currently, the CFTC sets limits only on U.S.-produced agricultural commodities.

Under the new plan, limits could be imposed on trading in the principal U.S. commodity markets of silver, gold, copper, cocoa, coffee and sugar, but would also include heating oil, foreign currencies and bank certificates of deposit.

Ceiling would also be imposed on nonstock options, which the commission plans to let futures exchanges start listing next year.

Speculative Limits

Speculative position limits are aimed at protecting commodity markets against harmful consequences that may result from extraordinarily large positions adopted by speculators, according to CFTC economists.

Although commodity exchanges

will have discretion in proposing the limits, they must submit the plans to the federal agency for approval. The markets have 90 days after the rule is published to submit their proposed limits.

The move follows the sharp rise and fall last year in the price of silver, which plummeted from more than \$50 an ounce in January, 1980, to around \$10 in March.

The CFTC's division of economics and education said the limits are designed to prevent "extraordinarily" large positions. It added that in some markets large speculative positions serve a legitimate purpose.

Some exchange officials said they were not happy with the CFTC action, though many acknowledged that they were not familiar with the details of the ruling.

GE Set to Acquire 3 Software Firms For \$68 Million

Reuters

NEW YORK — General Electric said Thursday it will acquire three privately held computer software companies for up to \$68 million in a move designed to expand its computing services operation.

The company said the three companies, Banking Systems Inc. of Dallas, Energy Enterprise of Denver Inc., and Software International Corp., will be acquired for between \$35 million and \$68 million, based on performance in the next few years.

GE said the three companies will become part of its General Electric Information Services Co.

GE said the acquisition of banking systems and energy enterprises have already been completed and the purchase of Software International is expected to be completed early this month.

It said GE information services plans to participate broadly in the information communication market, which it said is expected to grow at a 20 percent annual rate and reach \$100 billion in revenues by 1991. Earlier this year, GE acquired Lambda Technology Inc., a custom software supplier.

Gregory J. Liederman, president of GE Information Services, estimated that the operation's 1981 revenues would top \$500 million.

He said the company is looking to triple revenues to \$1.5 billion by 1986.

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provide a wide range of services, concentrating on the things we do exceptionally well.

For example, TDB London's trading desks specialize not only in foreign exchange but also in precious metals, money markets, banknotes and Eurobonds. We also pride ourselves on our capacity in sterling and dollar trade finance, whether through documentary credits, acceptances, letters of credit, ECGD or factoring. And our investment specialists are well-qualified to advise

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**TDB Holding Group: US\$10.4 billion in assets; US\$887 million in capital and loan funds employed as of June 30, 1981.**

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**CURRENCY RATES**

Inter-bank exchange rates for Oct. 1, 1981, excluding bank service charges.

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## Volcker Urges Passage Of Bill Aiding Thrifts

United Press International

WASHINGTON — Federal Reserve Board Chairman Paul A. Volcker Thursday urged Congress to act quickly to approve emergency legislation that would authorize cross-industry takeovers and financial aid for troubled thrift institutions.

Continued high interest rates have created severe earnings problems for financial institutions that are hampered by long-term, low-interest mortgage portfolios while being forced to pay customers high interest rates on investment instruments to remain competitive.

House Banking Committee Chairman Ferdinand J. St. Germain, a Rhode Island Democrat, introduced the legislation on behalf of Mr. Volcker and the other government regulators of financial institutions who developed the proposal. It would expire Dec. 31, 1982.

Mr. Volcker told the committee Thursday that the thrift industry's problems are "transitional in nature" and the basic solution "must be found in the context of success in the fight on inflation, bringing lower and more stable interest rates."

In the meantime, he said, "We must also be prepared to deal with the possibility that an increasing number of thrifts ... could find their capital depleted to the point of technical insolvency or failure, and some will face a need for reorganization and merger."

He said, "Part of our approach should be to provide reasonable support to those institutions that can and should survive problems not of their own making."

One provision of the bill would allow temporary capital assistance to failing thrifts through federal insurance funds.

### COMPANY REPORT

Revenue and profit, in millions, are in local currencies unless otherwise indicated.

#### Britain

Vickers	1980
Net Profit	1981
Revenue	281.3
Profits	10.0
Per Share	0.025

#### To our readers...

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Paul A. Volcker

Mr. Volcker said that if high interest rates continue, the legislation could save hundreds of millions of dollars because it would cost less to help thrifts over a temporary rough spot than for the institutions to liquidate, draining federal deposit insurance funds.

The legislation also sets up guidelines arranging government-supervised mergers between now and the end of 1982. "As a last resort," Mr. Volcker said, the legislation "would permit acquisition of thrifts by healthy out-of-state thrift institutions or alternatively, bank holding companies."

## Japanese Set to Announce Program to Boost Imports

By Takeshi Sato  
Reuters

TOKYO — Japan will disclose a plan Friday for increased imports of manufactured goods in an effort to subdue mounting criticism of its booming exports while giving a boost to its economy.

Toshio Komoto, director-general of the Economic Planning Agency, said Thursday that the measures would include enlarging the oil stockpile, bringing forward some public works projects and helping domestic industries in recession.

A Cabinet committee of economic ministers will also revise some economic forecasts for the fiscal year ending next March, one of which is to be an upward revision in the current account, to a surplus of \$7 billion from last December's forecast of a \$6 billion deficit.

The Finance Ministry said Tuesday that the surplus for the first eight months of the 1981 calendar year was \$643 million, up from a \$12.21 billion deficit in the first eight months of 1980.

Underlying government fears that Japan could face fresh trade friction from the United States and Western Europe were ministry figures that showed that surging exports in the eight months lifted the visible trade surplus to \$10.99 billion after a \$3.43 billion deficit a year ago.

Also, Finance Ministry officials Thursday predicted that Japan's current account and overall balance of payments surpluses will widen substantially in September from August surpluses of \$33.9 million and \$60 million, respectively.

The current account surplus for last month is expected to be large, but as yet unspecified, aided by strong exports. With a continued capital inflow through portfolio investment by nonresidents and external bond issues by Japanese companies, the September overall balance will have a surplus roughly estimated at about \$1 billion, the officials said.

Official figures will be announced later this month, but they added the external bonds issued by Japanese corporations in September will total about \$300 million, mostly on the Eurobond market, compared with \$279 million in August. Net investment by non-residents in Japanese bonds through Gen-sai trading will be as much as the \$1.06 billion in August, they added.

Although exports are booming, Japan's economy — the world's second largest after the United States — is recovering at a slower pace than expected following recessions in other major industrial democracies and big increases in oil import costs.

Output Off

Industrial production fell 2.2 percent in August after an increase of 1 percent in July.

Mr. Komoto gave no further details of the measures. But last month he had said they might include increasing imports of about 20 rare and strategic metals, such as molybdenum, manganese and nickel, for stockpiling.

The International Trade and Industry Ministry said last month that Japan would boost its crude oil stockpile, kept at sea in idle tankers, by about 30 percent to 39.18 million barrels — enough to cover needs for about 18 days.

EPA sources said Thursday that the new measures might include investment promotion and joint technological research and development with foreign countries, especially Western Europe.

The measures are being announced a day before a strong Japanese economic mission leaves for visits to several EEC countries.

Mr. Komoto did not indicate measures likely to be adopted to help domestic industries. But Japan's Federation of Economic Organizations (Keidanren), grouping top business, has urged the government to introduce emergency measures to help aluminum smelting, pulp and paper production and other domestic industries in recession.

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Official figures will be announced later this month, but they added the external bonds issued by Japanese corporations in September will total about \$300 million, mostly on the Eurobond market, compared with \$279 million in August. Net investment by non-residents in Japanese bonds through Gen-sai trading will be as much as the \$1.06 billion in August, they added.

Although exports are booming, Japan's economy — the world's second largest after the United States — is recovering at a slower pace than expected following recessions in other major industrial democracies and big increases in oil import costs.

Output Off

Industrial production fell 2.2 percent in August after an increase of 1 percent in July.

Mr. Komoto gave no further details of the measures. But last month he had said they might include increasing imports of about 20 rare and strategic metals, such as molybdenum, manganese and nickel, for stockpiling.

The International Trade and Industry Ministry said last month that Japan would boost its crude oil stockpile, kept at sea in idle tankers, by about 30 percent to 39.18 million barrels — enough to cover needs for about 18 days.

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# Royals Clinch Divisional Playoff Berth; Red Sox Cut Astros' Lead With 5-2 Victory

Kansas City to Play Oakland for Title

United Press International

DODGINGTON, Minn. — Hurdle hit a decisive two-run shot, and Larry Gura pitched a hit, as Kansas City clinched a playoff spot Wednesday evening. Minnesota, 5-2. The Red Sox will meet the Oakland A's, winners of the season's first-half

## SEBALL ROUNDUP

upmanship, in the American League West minisplayoff series when the A's win the second championship. The Royals will gain the minisplayoff title of their being runner-up in second half.

A vocal, enthusiastic crowd of 60,000 sat through rainy, cool weather to watch the final baseball to be played at Metropolitan Stadium. The Twins are scheduled move into a new domed facility downtown Minneapolis next year.

Juris (11-7) gave up a two-run

hitters' Dean threatens to quit over Salary Feud

The Associated Press

AN DIEGO — Fred Dean, San Diego's all-pro defensive end, has announced that he would retire rather than continue as one of the west's paid linemen in the National Football League.

"I'm not asking that I be the greatest paid defensive linemen but in asking that my salary be brought to the standard of my playing ability," said Dean, who is one of the NFL's top pass rushers. Dean's differences with the Chargers go back more than a year. The former Louisiana Tech standout, a No. 2 draft choice in 1975, refused to report to the team until after the second regular season game a year ago, and failed to show up at two practices last week.

"I'm willing to sit out the remainder of this season and next, if necessary, to obtain what is just," Dean said.

Dean's attorney, Dave Perrine, said he was seeking a salary for San Diego between last year's low of a six-year lineman of \$62,000 and the high of \$185,000. Dean's contract, which runs through 1984, was said to pay him \$75,000 annually.

Two weeks ago, wide receiver John Jefferson announced, at a news conference that he would never again play for the Chargers. He was traded to Green Bay two weeks later.

home to Pete Mackanin in the second inning but after that allowed only an infield single by Ron Washington in the third and a leadoff single by Gary Ward in the ninth.

Hurdle hit his fourth homer of the year in the fourth inning, off Fernando Arroyo (7-10), snapping a 2-2 tie.

"No champagne yet," said George Brett, whose club was 20-30 and 12 games behind Oakland when the players' strike started in June. "The champagne's still on ice. After we get to the championship game, maybe then some more for the World Series."

Brewers 10, Red Sox 5

In Milwaukee, Cecil Cooper's three RBIs and Robin Yount's four hits led Milwaukee over Boston, 10-5, in a rain-interrupted game. Yount led off the fifth with a single and moved to third when Cooper doubled. Gorman Thomas' single scored Yount. Ben Oglivie's double scored Thomas, and Sal Bando's single gave the Brewers an 8-3 lead.

The Brewers trail Detroit by three percentage points at the top of the American League East. The Tiger-Oriole game was rained out and was to be played on Thursday. The Brewers and Tigers close the season with a three-game series in Milwaukee starting Friday.

A's 3, Blue Jays 0

In Chicago, Mike Norris, in his final tune-up for the league playoffs, pitched a three-hitter as Oakland won its final regular-season home game, a 3-0 shutout of Toronto. Norris (12-9) allowed only three singles, struck out four and walked one. Rob Picciolo hit a leadoff home run in the third inning off Luis Leal (7-13).

White Sox 10, Angels 3

In Chicago, Greg Luzinski hit his 20th home run of the season and drove in four runs to lead the Chicago to a 10-3 rout of California. The White Sox scored seven runs in the second inning, with Luzinski driving in two and Wayne Nordhagen getting two singles and scoring a run. The Angels helped by making two errors. Bob Grich hit his 21st home run for the Angels, tying him for the American League lead.

Rangers 3, Mariners 1

In Seattle, knuckleballer Charlie Hough pitched a three-hitter as Texas beat Seattle, 3-1. It was the second complete game of the year for the 33-year-old righthander (4-1). He struck out eight and walked four.

## Cincinnati Trailing by a Half Game

United Press International

CINCINNATI — Ron Oester tripped to begin a two-run sixth inning and singled home a run during a two-run seventh Wednesday night to enable the Cincinnati Reds to defeat Houston, 5-2, and move within a half-game of the Astros for the National League West lead.

Hurdle hit his fourth homer of the year in the fourth inning, off Fernando Arroyo (7-10), snapping a 2-2 tie.

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## Major League Standings

NATIONAL LEAGUE

	W	L	Pct.	GB
Montreal	27	22	.521	—
St. Louis	27	22	.521	1/2
Philadelphia	27	22	.521	2/2
New York	27	22	.521	4
Chicago	27	22	.521	4
Pittsburgh	27	22	.521	7/2
West	31	18	.621	—
Houston	31	18	.621	1/2
Montreal	31	18	.621	1/2
St. Louis	31	18	.621	1/2
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